

the sections are taken in an extended scale. As for cost of labour, the Public Works rates and local rates paid by private individuals are apt to differ, and unless some superior authority like the Collector intervenes, no proper control can be exercised upon the estimates. I think a paragraph should be added pointing out the difficulties in the way of the zemindar in checking estimates."

"*Remarks by Messrs. Dampier and Harrison.*—The above note has been made by Maharajah the Hon'ble Joteendro Mohun Tagore, to whom, as being much interested in the subject-matter of this report, it has been shown. Colonel Haig has left, and the Committee is no longer complete at the time when the notes are received; hence the remarks added to this note, and to those attached to paragraphs 43, 44, 49, and 53 are those of Mr. Dampier and Mr. Harrison only. We admit that the zemindar has great difficulties to contend against in effectively checking the Engineer's estimates, but they are different altogether, not merely in degree, but in kind, from those we are referring to above. The Collector and the Superintending Engineer have no separate establishment at all wherewith to check the Engineer's estimates. If the estimates represent a breach as 120 feet long and 1½ deep, it is quite impossible for an officer who cannot visit the spot to say that it is only 100 feet long and 9 feet deep, or if the Engineer states that a certain embankment was over-topped in a recent flood, it is impossible for him to say that it was not. The zemindar has an ample local establishment to enable him to check the estimates, but his difficulty is that he cannot understand them. The estimates are prepared, hoodah by hoodah, and mile by mile, and it is no doubt very difficult for a zemindar to say for certain that there is not the amount of earthwork to be done which the estimates represent. This could be remedied if it were provided that any zemindar might by previous application be present in person or by deputy when the measurements are made. So very few zemindars make any effort to check the estimates that it would only be an obstruction to business to require any notice to be served on them all, but it might be prescribed that if any zemindar applied specially to be kept informed of the day when the work actually done would be measured up, previous notice of not less than five days should be given him to enable him to be represented."

BABOO KRISTODAS PAL quite agreed with his colleagues in Committee that it might be difficult to serve notice on all the zemindars interested, but some provision, he thought, might be made to the effect that the Engineer should frame his estimates in consultation with those interested, and he would then take the necessary steps before submitting his estimates. It was for this reason that he wished to add this clause. If the zemindar and the Engineer could be made to act conjointly in the preparation of estimates, it would greatly reduce disputes and litigation.

The HON'BLE MR. DAMPIER said it was very unpalatable for him, motion after motion, to have to oppose his hon'ble friend, when he really agreed heart and soul in the principle of the amendments which he proposed. He certainly agreed that an Engineer preparing estimates and plans, the results of which were eventually to be paid for by the zemindars, would not be doing his duty if he refused to listen to those interested when they wished to point out that the work could be done as effectively in a more economical manner. But when introducing this Bill, MR. DAMPIER had particularly said that it was a Bill which must be supplemented immediately by the issue of rules and orders by the Lieutenant-Governor on the executive side. He would give an instance to show why he objected to the introduction of these apparently harmless little words. His hon'ble friend had said that he did not ask for the service of notices, but imagine a case going into court, and the point turning upon the question whether the estimates were prepared "so far as it may be practicable in consultation with the persons interested in the work." It would be argued that notices had not been served and therefore all that was practicable had not been done and that the law had consequently not been complied with, and then all the proceedings might be upset on this point. Another illustration might be given from the very extract which the hon'ble member had read to the Council. The Committee to which his hon'ble friend referred was an Official Committee, consisting of Colonel Haig, Mr. Harrison, and Mr. Dampier, who were appointed to report upon the working of Act VI (B.C.) of 1873, with reference to Midnapore. Why then did they show their report to Maharajah Jotendro Mohun Tagore? Simply because it was their duty to make their report, to use the words of the amendment, as far as possible on consultation with persons interested. There was no doubt that the Maharajah was very much interested in the question, and therefore the Committee thought fit to consult him, and MR. DAMPIER had no doubt that more or less every Collector who was interested with the working of the Act would do the same. But he objected to the introduction of these words because their only effect would be to give another opportunity

for finding flaws in the proceedings, if inadvertently some omission took place in the service of notices and the like.

HIS HONOR THE PRESIDENT quite agreed with the principle of the amendment, but he thought the introduction of the words proposed would make it very difficult to put the Act into force. He thought it ought to be left to the Government to take the necessary measures to see that those interested should have an opportunity of representing their views, and he had no doubt that in the rules passed under the Act provision would be made for the purpose. As he had said before the scope of the amendment was entirely in accordance with the principle upon which this Act was being passed, and with present practice: indeed, it was the policy of giving those interested in embankments a better and safer position than they had before, which led to this Bill being brought forward.

The amendment was then by leave withdrawn.

#### AMENDMENT OF THE EXCISE ACT.

THE HON'BLE MR. REYNOLDS moved for leave to introduce a Bill to amend the Bengal Excise Act, 1878. He said he felt that he ought to ask the indulgence of the Council in rising to ask for permission to introduce a Bill for the amendment of an Act which had been amended only last year, more especially as the amending Bill of last year was in his charge. But his excuse was that the weak points of an Act were apt to remain undetected until they were brought to prominent notice by the experience gained in the practical working of the law. In this case he believed there could be no difference of opinion as to what the intention of the Legislature was, but the language which was used in the Act was unfortunately such as to carry out that intention somewhat imperfectly, and the result had been that when an attempt was made to put the law into operation against a supposed offender, the High Court set aside the conviction which had been obtained before a Magistrate, and pronounced that no offence against the law had been committed. If hon'ble members would refer to the Excise Act of 1878, they would find that section 15 prescribed certain definite quantities for the retail sale of exciseable articles, and it was provided that, subject to any other special direction by the Board of Revenue, the sale of such articles in larger quantities than those specified should be held to be a sale by wholesale, and that a sale in less quantities should be a sale by retail. Then section 17 provided that no person who was not a licensed vendor should have in his possession a greater quantity of any excisable article than that specified in section 15. And the corresponding penalty section was section 61, which declared that any person other than a licensed manufacturer or vendor, or a person duly authorised to supply licensed vendors, having in his possession any greater quantity of any exciseable article than the quantity specified for each article in section 15, without a pass from the Collector, should be liable to fine.

The quantity of *tári* specified in section 15 was 12 seers. MR. REYNOLDS thought it was possibly the case that the specific quantities mentioned in the Act were not very carefully considered before the Act was passed, because it might have been thought that as a discretion had been reserved to the Board of Revenue to alter those quantities, it was a matter of no great importance what exact quantities were specified. But, however, that might be, the Board found it necessary to reduce the quantity in respect to *tári* from 12 to 4 seers; and that reduction was duly notified. A man was subsequently prosecuted for having in his possession 6 seers of *tári*, being a quantity in excess of the quantity authorised to be kept by persons who were not licensed vendors; he was convicted by the Magistrate, and sentenced to a fine, but on the case being referred to the High Court, the Court decided that no offence had been committed under section 61, because that section referred to the quantities *specified* in section 15 and did not cover any different quantity which might be notified by the Board under the power vested in it. MR. REYNOLDS did not wish to find fault with the decision of the High Court. Section 61 being a penal section, the obvious principle of law was that it should be strictly construed, and when so construed it did not cover the altered quantity of *tári* prescribed by the Board.

The object of this Bill was simply to remove this blemish, and to carry out what was no doubt the intention of the Legislature, that the penalty

provided by section 61 should apply not only to the actual quantities enumerated in section 15, but also to any variation of those quantities which the Board might notify under the wording at the beginning of the section, which reserved to the Board the power to alter any of those quantities.

The HON'BLE AMEER ALI said that as the hon'ble mover was about to amend the Act he thought it would be advisable to take this opportunity to explain the meaning of the word "possession" in section 61. There had been a case lately before one of the Presidency Magistrates in Calcutta which gave rise to a discussion as to the meaning to be attached to the word "possession," viz. whether a person who was simply a transmitter of imported exciseable articles which were to be despatched to places out of Calcutta, had "possession" of such articles within the meaning of the Act. As some difficulty had arisen on account of the wording of the section, probably the hon'ble member would take this opportunity to make the meaning of the word "possession" clear, so as to leave no doubt in the matter.

The motion was agreed to.

The Council was adjourned to Saturday, the 15th instant.

#### DECREASE OF FISH TRAFFIC ON THE EASTERN BENGAL RAILWAY.

REVENUE DEPARTMENT—MIS. REVENUE.

*Calcutta, the 4th April 1882.*

##### RESOLUTION.

##### READ—

A letter from the Agent, Eastern Bengal Railway, No. 4833, dated the 12th November 1881, reporting a serious falling off in the fish traffic from Goalundo during the year 1881.

A letter from the Commissioner of Dacca, No. 611, dated the 24th February 1882, reporting the result of enquiries regarding the decrease in the number of Hilsa caught and exported from Goalundo during the same year.

A letter from the Agent, Eastern Bengal Railway, No. 1140, dated the 15th March 1882, with a statement showing the state of the fish traffic on that railway for January and February 1882.

From the reports cited above, it appears that the traffic in fresh fish (chiefly Hilsa) on the Eastern Bengal Railway between Goalundo and Scaldah fell off very seriously during the year 1881, owing to the small take of fish in that year, and that, although the falling off has continued up to the present time, no satisfactory explanation of the unusual scarcity of fish in the Pudma has been discovered. The falling off has been attributed to the contamination of the water due to the steeping of jute, to the lowness of the water in the river, and even to the alarm caused by the steamers plying on it, but these causes appear to the Lieutenant-Governor to be altogether insufficient to account for the great and sudden diminution which has been observed. The matter is, however, one of sufficient importance to demand careful investigation, and the Lieutenant-Governor will direct the officers in charge of the districts bordering on the rivers from which the supplies of fish are obtained to continue to give their attention to the subject, and to report to Government any facts which may come to their notice calculated to throw light on the real cause of the falling off in the fish trade.

ORDER.—Ordered that a copy of this Resolution, and of the Reports cited in it, be published in the *Calcutta Gazette* for general information.

Also that copies of the above be submitted to the Government of India, in the Department of Revenue and Agriculture, for information.

Also that a copy of this Resolution be forwarded to the Commissioner of Dacca for information and guidance.

By order of the Lieutenant-Governor of Bengal,

D. BARBOUR,

*Offg. Secretary to the Government of Bengal.*



No. 4883, dated Calcutta, the 12th November 1881.

From—F. PRESTAGE, Esq., Agent, Eastern Bengal Railway Company,  
To—The Secretary to the Government of Bengal, Revenue Department.

I HAVE the honour to draw attention to the attached statement showing the comparative quantities of fresh fish sent down this Railway per month from Goalundo during the last three years, and from which it will be seen that during the year 1881, so far, there has been a most serious falling off in the supply of this valuable article of food.

2. I am also given to understand that the quantity of fish salted at Goalundo shows an equally serious diminution.

3. Without professing to know much of the habits of the "*hilsa*," it may be useful to note that during the last season, and when the falling off has been most serious, the Ganges has been unusually low, more particularly in the early part of the freshets, and from which it is thought that much less food has been brought down into that river, and so caused it to be less attractive to the fish as a feeding ground.

4. It may also be useful and interesting to note that the fish frequent the Ganges only, and avoid the Brahmapootra. This may be caused by the much larger quantity of deposit and food in the waters of the former river, or it may be due to the lower temperature of the Brahmapootra waters.

5. It has been suggested that the increasing quantity of jute steeped each year in the bheels and khalls leading into the Brahmapootra may have caused the waters of that river to become polluted; but considering the enormous discharge of that river, and the comparatively few drops of water polluted by the steeping of jute, this cannot, I should think, affect the whole; but if it did so, it might be the cause of fewer fish travelling up the Pudda below Goalundo, as from that point, as is known, the Ganges and the Brahmapootra waters mingle together.

6. Against the theory of the possible effect of the jute-steeping, it should be noted that the falling off in the taking of fish was most serious early in the year, and during the period of the year that no jute-steeping is done.

7. I would beg to solicit that the falling off in this important supply of food, and also of valuable traffic to this and the Northern Bengal State Railway, be brought to the notice of the Lieutenant-Governor, that His Honor may, if so disposed, be pleased to cause an enquiry to be made, with a view to trace, if possible, the causes of the scarcity.

## EASTERN BENGAL RAILWAY.

Goalundo Fish Traffic from 1st November 1878 to 31st October 1881.

	1878.	1879.	1880.	1881.	Total.
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
January	.....	20,689 15 0	33,090 6 0	6,192 0 0	59,976 5 0
February	.....	59,823 10 0	63,511 14 0	11,346 13 0	1,24,682 5 1
March	.....	24,212 9 0	19,328 8 0	2,471 8 0	46,013 9 0
April	.....	4,549 4 0	2,532 15 0	2,299 13 0	9,381 14 0
May	.....	3,120 5 0	1,627 11 0	679 10 0	5,427 10 0
June	.....	10,789 13 0	1,802 5 0	1,947 5 0	14,509 7 0
July	.....	3,455 4 0	1,152 3 0	409 1 0	5,016 7 0
August	.....	4,455 1 0	1,787 12 0	460 14 0	6,703 11 0
September	.....	2,630 5 0	6,604 11 0	1,067 5 0	10,292 5 0
October	.....	2,076 11 0	3,610 13 0	1,610 7 0	7,297 15 0
November	2,352 9 0	2,830 0 0	1,808 13 0	.....	17,081 6 0
December	6,196 1 0	5,510 15 0	3,900 4 0	.....	5,497 4 0
Total	8,538 10 0	1,44,113 12 0	1,30,748 0 0	28,424 12 0	3,11,825 2 0



No 611, dated Dacca, the 24th February 1882.

From—F. H. PELLEW, Esq., Commissioner of the Dacca Division,

To—The Secretary to the Government of Bengal, Revenue Department.

WITH reference to your office memorandum No. 2578—216MR, dated 23rd November last, forwarding, for careful enquiry and report, copy of a letter No. 4833, dated 12th idem, from the Agent, Eastern Bengal Railway Company, regarding the decrease in the number of hilsa fish caught and exported from Goalundo in 1881, I have the honour to state that the matter appears to have been personally enquired into by the Collectors of Dacca and Furreedpore, and the Assistant Magistrate of Goalundo, but nothing definite has been ascertained. Indeed the result of their enquiry does not seem to have elicited anything further than what has already been reported to Government by Mr. Prestage.

2. The Assistant Magistrate of Goalundo states that, "as regards the fluctuations in the fish trade from month to month in a single year, more fish is caught when there is less water, but that, taking into consideration the variations from year to year, heavy floods are followed by a large increase of fish in the Pudma after the floods have subsided." He then goes on to say that the larger the volume of water the greater the deposit of food, and a larger number of fish resorts to the Pudma river as a feeding ground.

3. In forwarding the Assistant Magistrate's report, Mr. Price says that he has made "a careful personal local enquiry into the matter," and that it is his opinion that there are only "two theories to account for the decrease of fish caught at Goalundo." His first theory is that the hilsa fish, owing to the deficiency of the floods of late years, have found the Pudma a less attractive feeding ground, and have not frequented it in large numbers as before. The second is that the same deficiency in the floods has, by reason of the absence of pressure, prevented the difference of temperature between the water of the sea and that of the Pudma, and that in consequence the fish have not sought the waters of the Pudma for the sake of the coolness which they experienced in former years. I submit these observations as they stand, but they are not quite intelligible.

4. The Collector of Dacca says that the fishermen themselves attribute the decrease to (1) the lowness of the river, and (2) the alarm caused to the fish by the steamers plying on the river. As he points out, it is impossible to attribute any serious effect to the latter cause, and the former has probably much to do with the decrease.

No. 1140, dated Calcutta, the 15th March 1882.

From—The Agent, Eastern Bengal Railway Company,

To—The Offg. Under-Secretary to the Government of Bengal, Revenue Dept.

WITH reference to your letter No. 567 of the 7th instant, I have the honour to forward herewith the statement of fish traffic for the months of January and February 1882.

EASTERN BENGAL RAILWAY.

*Fish Traffic.*

1882.	Weight.		Amount.		
	Mds.	s.	Rs.	A.	P.
January	...	...	3,917	25	5,234 13 0
February	...	...	12,745	6	14,228 9 0
Total	...	...	16,662	31	19,463 6 0

## Rainfall, Weather, and State and Prospects of the Crops.

Statement showing Rainfall, Weather, and State and Prospects of the Crops in the different Districts of Bengal, as reported to Government during the week ending the 8th April 1882.

No.	District, and date of return.	Rainfall at Sudder Station in inches.	Character of the weather, state and prospects of the crops, and state of health at date.
<b>BENGAL.</b>			
• <i>Western Districts.</i>			
BURDWAN DIVN.	1 Burdwan, April 10 '82	Nil	Weather—hot. Rain wanted for ploughing. Cholera abating.
	2 Bankoora, „ 8 „	0.37	Weather—very warm. A shower of rain and hail fell at head-quarters on the 7th. Wheat and barley are being reaped and thrashed, and are yielding a very good return. <i>Khosla til</i> , <i>bora</i> cotton and indigo are growing in all parts of the district. General health good.
	3 Beerbhoom, „ 8 „	Nil	Weather—hot and dry. Clouds gathering. Rain wanted to facilitate ploughing. Cholera very bad in the country about Sakulipore. Number of deaths has risen to 500. Price of salt has fallen.
	4 Midnapore, „ 8 „	0.21	Weather—seasonable. Scarcely any crop in the field. Prices low. General health good on the whole.
	5 Hooghly, „ 8 „	0.3	Weather—very warm till 8th. No crops on the ground. Rain wanted for cultivation and for drinking water. Cholera and cattle-disease still linger in the Serampore sub-division.
PRESIDENCY DIVN.	Howrah, „ 10 „	Nil	Weather—hot, with strong winds. Rain wanted for <i>bora</i> rice. A few sporadic cases of cholera have occurred.
	Moheshrekha „ „	0.15	
	• <i>Central Districts.</i>		
	6 24-Pergunnahs, April 10 '82	Nil	Weather—hot, and cloudy towards the evening. There are no crops on the ground. Ploughing for early and <i>amun</i> crops continues. Public health generally good. Cholera reported from the Diamond Harbour sub-division.
	7 Nuddea, „ 8 „	1.45	Weather—hot. Ploughing still continues. More rain wanted. Fever slightly abating. Cholera stationary, except in a few places.
RAJSHAHYE AND COOCH BEHAR DIVN.	8 Jessore, „ 8 „	0.07	Weather—cloudy and cool, with high wind and occasional storms. Cultivation progresses actively under the influence of favourable weather. Rain is, however, still needed in parts of the district. Indigo crop looks promising. Public health generally good, though cholera and fever are on the increase.
	9 Moorsshedabad, „ 8 „	0.12	Weather—warm and cloudy. There was a fall of rain on 7th. Cold-weather crops have almost been harvested. The rain has been beneficial, and ploughing is rapidly going on. Cholera has abated a little at Jungypore. It prevails here and there in other places.
	10 Dinagepore, April 7 '82	Nil	Weather—seasonable and cool for the time of year. Sowing of <i>bhadoi</i> commenced. Outturn of barley about 10 annas. Rice selling at from 22 to 38 seers per rupee.
	11 Rajshahye, „ 8 „	0.15	Weather—hot, with occasional dust-storms. Want of rain is still greatly felt. Land is being prepared for paddy and jute crops, and in places being sown. Cholera in many parts of the district. Fever as before.
	12 Kungpore, „ 7 „	Nil	Weather—seasonable. <i>Aus</i> crop is almost everywhere above ground. The late rain has done much good. Public health good.
DACCAN DIVN.	13 Bogra, „ 8 „	0.98	Weather—warm throughout the week, except to-day (8th). Heavy showers of rain with hail last night (7th). Ploughing and sowing still going on. The rainfall of last night has been very beneficial, but more is desirable. <i>Kherachi</i> , sugarcane and pulses are being reaped. Health good.
	14 Pubna, „ 8 „	1.00	Weather—high winds with heavy rain on 7th. The rain has much improved prospects. Public health generally good, but cases of cholera reported here and there.
	15 Darjeeling „ 8 „	1.02	Weather—rather more cloudy than usual for the season, but favourable for tea and all crops. A few cases of cholera still occur in the Terai.
	16 Julpigore, „ 8 „	0.6	Weather—cool and generally fine. There was a thunderstorm and some rain on Friday night (7th). State and prospects of crops generally fair and promising. There has been too much rain in some places.
	Cooch Behar, „ 6 „	Nil	Weather—cool in the beginning of week, warm since. Tobacco is still being cut. Prospects of <i>cheena</i> and <i>kaon</i> favourable. Rice sells at Rs. 2 per maund.
• <i>Eastern Districts.</i>			
DACCAN DIVN.	17 Dacca, April 8 '82	0.01	Weather—warm and cloudy, with strong south wind. Gathering of winter crops nearly completed; yield average. Sowing of paddy and jute going on. Public health generally good.
	18 Furreedpore, „ 8 „	3.08	Weather—fair. Prospects of standing paddy crop good.
	19 Backergunge, „ 6 „	Nil	Weather—strong wind from the south and south-east. No signs of rain, which is much wanted. Sugarcane doing fairly well, but <i>aus</i> sowings are somewhat retarded. Small-pox is disappearing, but many deaths from cholera are reported.
	20 Mymensingh, „ 7 „	0.15	Weather—hot, with slight rain. State and prospects of crops good.

No.	District, and date of return.	Rainfall at Sudder Station in inches.	Character of the weather, state and prospects of the crops, and state of health at date.
<b>BEHAR.—contd.</b>			
<i>Eastern Districts—contd.</i>			
CHITTAGONG DIVN.	21 Chittagong April 11 '82	1.91	Heavy showers in many places, beneficial to spring crops and tea. Prices stationary. Small-pox and cholera not yet ceased. General health fair.
	22 Noakholly, " 6 "	Nil	Weather—warm and cloudy. High southerly wind. Sesamum and moong are still being gathered. Preparation of land for <i>aus</i> paddy going on. In some places <i>aus</i> paddy has been sown.
	23 Tipperah, " 7 "	Nil	Weather—windy and hot. Prospects of crops normal.
	24 Chittagong Hill Tracts, " 4 "	0.20 0.26	Weather—very disturbed; cloudy with high south-east wind. <i>Joom</i> burning commenced. Tobacco crop much improved by rain. Sugarcane doing well. Cholera and small-pox very prevalent all over the district, and many deaths have occurred.
	Hill Tipperah, " 5 "	Nil	Weather—warm. No important crop in the field. Ploughing for sowing paddy has commenced. Public health good.
<b>BEHAR.</b>			
PATNA DIVN.	25 Patna, April 8 '82	Nil	Weather—seasonable. Harvesting of <i>rubbee</i> is still going on. Public health generally good.
	26 Gya, " 8 "	Nil	Weather—hot during the day. Maximum reading of thermometer in shade 106° F. <i>Rubbee</i> is still being harvested; outturn below the average. A few cases of fever and small-pox reported in the interior.
	27 Shahabad, " 8 "	Nil	Weather—hot and somewhat cloudy occasionally. <i>Rubbee</i> harvest below the average.
	28 Durbhanga, " 8 "	Nil	Weather—cool in the morning and hot in the day. Strong east wind blowing. Indigo promising well. A little cholera in the south and east. Prices rising slightly.
	29 Mozufferpore, " 8 '82	Nil	Weather—hot, sometimes cloudy. Harvesting of <i>rubbee</i> crops continues. Ploughing for early rice in progress. New wheat and barley coming into the market. Public health good.
	30 Sarun, " 8 "	Nil	Weather—hot and bright, with west winds prevailing. <i>Rubbee</i> crops are being threshed, the west winds being favourable to threshing. Indigo coming on well. Opium weighments in progress; the outturn is expected to be less than the estimate. Prices cheap. General health good.
BHAGULPORE DIVN.	31 Champaran, " 8 "	Nil	Weather—hot in the day, cool in the night. <i>Rubbee</i> crops are still being harvested; outturn generally good. Public health fair.
	32 Monghyr, April 8 '82	Nil	Weather—seasonable. Harvesting of <i>rubbee</i> crops nearly concluded; average outturn expected.
	33 Bhagulpore, " 10 "	Nil	Weather—hot. West winds blew in early part of the week; latterly east winds. No crops on the ground at present. Lands are being ploughed, and in some places paddy sowings have commenced. Cases of cholera reported from all parts of the district. In Kissengunge and Behipore thanas there has been a large number of cases.
	34 Purneah, " 8 "	Nil	Weather—fine. <i>Rubbee</i> harvest nearly finished; outturn poor. Cholera nearly everywhere.
	35 Maldah, " 9 "	0.05	Weather—getting very hot, and westerly wind blows stronger. There was a slight shower with hail yesterday afternoon (8th). Harvesting of <i>rubbee</i> crops continues. Condition of <i>boro</i> paddy fair. Lands are being cultivated and sown with <i>bhadai</i> paddy in the <i>dearah</i> parts of the district. A few cases of cholera reported from Englishbazar and Shibgunge thanas. General health fair.
	36 Sonthul Pergahs, " 9 "	Nil	Weather—hot, west winds prevalent. Harvesting of wheat and barley nearly over in Godda and Rajnehal; outturn below the average in Godda. In Jamtara and Deoghur <i>mohua</i> crop poor. Some cases of cholera at Sahelgunge and near Godda.
<b>ORISSA.</b>			
ORISSA DIVN.	37 Cuttack, April 7 '82	Nil	Weather—hot. <i>Dalua</i> rice is being reaped. Rain very much wanted for ploughing. Common rice sells at from 26 to 32 seers per rupee. Cholera and small-pox still reported.
	38 Pooree, " 6 "	Nil	Weather—seasonable. Land is still being tilled for <i>sarad</i> crop. <i>Dalua</i> rice is being harvested in some places and is in ear in others. <i>Moong</i> is being harvested. Miscellaneous crops are promising. Common rice sells at from 30 to 38 Calcutta seers per rupee. Cattle-disease still reported. Cholera prevails in the country.
	39 Balasore, " 7 "	Nil	Weather—strong winds with storms; there has been a threatening of rain, but no appreciable rain has fallen. There is much need of rain, for cholera is severe in many places, especially along the coast. Cattle-disease reported in places.
<b>CHOTA NAGPORE.</b>			
<i>South-West Frontier Agency.</i>			
	40 Hazaribagh, April 7 '82	Nil	Weather—hot and sometimes cloudy. Little or no crop on the ground at present. There is a partial failure in both the <i>mohua</i> and mango crops. Some cases of small-pox reported from the interior, and of cattle-disease from several stations.
	41 Lohardugga, " 8 "	Nil	Weather—hot and occasionally cloudy. <i>Mohua</i> crop good in the Palamow sub-division, but indifferent elsewhere in the district. No crops on the ground. Mango crop is a total failure. Rain wanted for spring ploughings. Prices steady. Public health generally good. Small-pox apparently decreasing.
	42 Singbhoom, " 7 "	Nil	Weather—very hot, with westerly wind. No crops to report about. General health good.
	43 Manbhoom, " 8 "	Nil	Weather—very hot. Cotton and sugarcane doing well: a deficiency in <i>mohua</i> crop is reported from Govindpore, but is hardly borne out by facts. Public health generally good. A few cases of cholera, apparently sporadic, reported from south of district, and from villages in the Govindpore sub-division on the Grand Trunk Road.

Published for general information.

CALCUTTA, STATISTICAL DEPT.,

The 11th April 1882.

COLMAN MACAULAY,

Offg. Secy. to the Govt. of Bengal.



The following Statement shows the Quantities of the Principal Staples of Traffic imported into Calcutta from the Interior during the month of January 1882.

## IMPORTS INTO CALCUTTA.

Whence imported.	FOOD-GRAINS.							FIBROUS PRODUCTS.		OIL-SEEDS.		Tea, Indian.	Cotton, raw.	Silk, raw.	SUGAR.		
	RICE AND PADDY.			Wheat.	Gram and pulse.	Other food-grains.	Total.	Jute, raw.	Gunny-bags.	Linseed.	Mustard-seed.				Refined.	Unrefined.	
	Rice.	Paddy.	Total (in rice).														
BENGAL.																	
	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	No.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.
Burwan	1,15,169	17,660	1,26,006		618		1,26,824					132		16			
Barhoom	77,485		77,485				77,485							80			
Chhapra	2,03,820	1,13,318	2,74,644				2,74,644	200	580	108				115		1,017	
Chhally	68,026	3,147	69,993	4,478	5,905	2,366	73,832	27,028	686,670	31,251	2,460		1,786	2	1,137	8,337	
Porcunnahe	6,46,571	96,847	7,07,100				7,17,638	77,285	667,908	52	34			876	23,154	68,878	
Chhally	3,080		3,080	6,952	31,293	2,223	43,356	48,375	9,422	2,532	951			205	618	16,154	
Chhally	27,135	2,350	28,004	167	590	1,275	30,616	8,609		145	659			4	530	1,959	
Chhally	12,799		12,799	2,097	7,726	135	23,557	4,109		307	316						
Chhally	1,328		1,328				1,328	2,012	882,433					491			
Chhally	1,052		1,052	555	3,425	132	5,144	22,109	480	461				234			
Chhally	5,147		5,147				5,147	1,567	327,865		7						
Chhally	300		300				300	2,96,690	189,370	391							
Chhally								700						42			
Chhally								46,509	233,595			3,295					
Chhally	16,088		16,088	300	250		16,638	2,76,158	353			14	1,340				
Chhally	23,280		23,280		1,219	300	24,799	1,58,596	1,299		1,770		161				
Chhally	10,04,479	880	10,04,833		18		10,04,841				530						
Chhally	501		501				501	49,080									
Chhally	4,800		4,800				4,800										
Chhally	2,655		2,655				2,655							930			
Chhally	24,001		24,001				24,001										
Total of Bengal	23,17,046	2,33,872	24,63,216	15,196	61,627	6,431	25,46,470	10,99,583	2,900,043	33,237	6,738	4,422	4,372	936	25,455	79,023	
BEHAR.																	
Chhally	2		2	1,23,337	63,411	2,612	1,94,362			1,00,492	6,054	1			1,830	863	
Chhally				543			543									1,200	
Chhally				22,023	2,430		24,453			8,766					1,130	4,305	
Chhally										2,094	300						
Chhally				271	215	2,634	3,141			22,967	2,966						
Chhally				7,116	352	1,985	9,453			26,418	6,529						
Chhally				10,263	34,411		53,694			2,960	1,435	1				73	
Chhally	10		10	16,062	1,115	6,578	23,755			5,418	8,308				1		
Chhally				602	1,262	6,056	5,980			14,050	1,750	58					
Chhally	1,470		1,470	1,434	445	675	4,024	2,985									
Chhally	811		811	1,507	5,826	813	8,957	3,243		1,909	545			7	409		
Total of Behar	2,293		2,293	1,07,218	1,09,487	19,377	3,28,376	6,288	14,050	1,72,305	27,397	60		7	3,370	6,441	
ORISSA.																	
Chhally	18,821	2,612	20,453	695			21,148	1,899					113				
CHOTA NAAGPORE.																	
Chhally					3,516		3,516			2,413	37						
Total of supplies from the Provinces under the Lieutenant-Governor of Bengal.	23,38,160	2,36,484	24,85,962	2,13,109	1,74,630	23,808	28,99,500	11,07,710	2,914,093	2,07,442	36,549	4,519	4,483	943	28,835	83,494	
OTHER PROVINCES.																	
Chhally	28		28				28	9,744			3,163	43,402		76			
Chhally	8		8	2,03,398	191	818	2,04,415			20,381	78,517	463	5,00,704		401	293	
Chhally	1		1	9,566	1,092	1	11,470				228						
Chhally				20,948			20,948			269			6,404				
Chhally					15		15				540		16,355				
Chhally					715		715							1	7,841		
Chhally	1		1									2	1,841		28		
Total of Imports in 1882	23,38,198	2,36,484	24,85,962	4,47,921	1,77,457	34,642	31,37,120	11,17,454	2,914,093	2,07,442	36,549	4,519	4,483	943	28,835	83,494	
Total of Imports in Jan. 1881	23,07,883	1,87,884	24,75,310	4,51,670	1,70,529	21,891	31,49,806	10,23,824	1,889,090	1,90,834	50,759		34,332	2,35,326	1,010	81,554	

The Sea-borne Trade of Calcutta in these Staples during the month of January 1882 was as follows:—

EXPORTED FROM CALCUTTA—	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	No.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.
Indian Ports, viz.—																
Calcutta	1,79,013		1,79,013				1,79,013	4,060	1,533,950			18			4,104	153
Port of Bombay	8,043		8,043				8,043		50,400						105	
Port of Madras	5,541		5,541				5,541		50,500						109	
Port of Burmah	1,70,599	18,071	1,87,895				1,87,895	8,508	181,850			2			1,071	1,206
Port of Andaman	2,059		2,059				2,059		1,00,000			15			4,036	
Port of Ceylon	4		4				4		240,675			3			236	
Port of Interport	3,09,959	18,071	3,81,253	1,601	23,480	31	4,08,363	13,168	3,633,375			38			10,379	1,393
Foreign Ports—																
United Kingdom	1,37,053	7,679	1,42,732	2,63,400	599		4,11,731	4,65,613	2,98,648	17,903	59,286	1,01,308		50		6,679
Other Foreign ports	11,90,760		11,90,760	4,10,990	20,934	2,358	10,30,997	3,02,701	2,001,025	1,05,118	4,939	611	85,710	73	1,534	
Total of Foreign ports	13,25,713	7,679	13,33,612	6,84,390	21,533	2,358	20,42,788	7,68,314	2,001,025	4,07,306	22,863	59,877	2,37,018	123	1,534	6,679
Total of Exports in 1882	16,08,072	23,750	17,14,765	6,86,998	45,033	2,359	24,46,053	7,70,493	6,04,500	4,07,306	22,863	59,877	2,37,018	199	11,903	8,977
Total of Exports in Jan. 1881	16,07,733	1,149	16,08,611	4,05,241	40,757	14,398	22,69,647	7,10,791	5,751,970	1,99,543	18,110	59,101	2,36,170	1,634	2,343	652

\* One maund of paddy is equivalent to 55 seers of rice.

\* Exclusive of bags obtained by local manufacture.

The following Statement shows the several Routes followed by the Trade in the Principal Staples of Traffic imported into Calcutta during the month of January 1882.

## IMPORTS INTO CALCUTTA.

SPECIFICATION OF ROUTES.	FOOD-GRAINS.					FIBROUS PRODUCTS.		OIL-SEEDS.		Tea, Indian.	Cotton, raw.	Silk, raw.	SUGAR.	
	Rice.	Paddy.	Wheat.	Gram and pulses.	Other food-grains.	Jute, raw.	Gunny-bags.	Linseed.	Mustard-seed.				Refined.	Unrefined.
	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	No.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.
By country boats ...	20,24,647	2,02,019	62,203	66,638	15,735	4,85,852	2,055,530	98,575	34,675	.....	2,550	113	6,837	31,600
By river steamers ...	28	.....	.....	18	.....	1,62,063	.....	.....	3,133	41,250	.....	78	.....	.....
By rail (East Indian)	1,61,480	.....	3,83,768	80,805	10,075	.....	.....	1,23,431	79,310	822	2,07,547	694	3,771	4,770
By rail (Eastern Bengal)	7,108	.....	248	12,079	874	3,89,505	820,485	1,450	1,680	5,533	1,614	234	.....	14,850
By road	1,27,578	31,853	47	11,183	.....	78,015	38,078	130	40	.....	302	2	1,063	52,970
By sea	17,357	2,412	693	734	.....	1,800	.....	.....	.....	941	18,310	27	8,045	85,750
Grand total of Imports in January	1882... 23,38,198	2,36,484	6,47,921	1,77,467	26,642	11,17,454	2,014,093	2,28,592	1,18,768	48,616	2,80,259	1,090	37,371	85,750
	1881... 23,57,853	1,87,884	4,81,576	1,70,529	21,891	10,23,824	1,880,990	1,90,833	50,750	34,332	2,55,830	1,610	22,704	85,750

The following Statement shows the Values, Quantities, and Numbers of the Principal Staples of Traffic exported inland from Calcutta during the month of January 1882.

## EXPORTS FROM CALCUTTA.

Whither exported.	Cotton piece-goods.		Cotton twist.		Salt.	Gunny-bags.	Whither exported.	Cotton piece-goods.		Cotton twist.		Salt.	Gunny-bags.
	European.	Indian.	European.	Indian.				European.	Indian.				
BENGAL.													
	* Rs.	Rs.	Mds.	Mds.	Mds.	No.	CHOTA NAGPORE.	Rs.	Rs.	Mds.	Mds.	Mds.	No.
Burduwan	4,01,525	1,462	487	782	46,891	78,075	Hazaribagh	43,425	258	.....	50	4,984	5,200
Beerbhoom	65,625	1,032	35	239	6,729	60,900	Manbhoom	70,275	.....	26	676	3,700	2,300
Midnapore	1,16,621	.....	820	.....	2,170	19,795	Total of Chota Nagpore	1,13,700	258	26	735	8,774	7,300
Hoochly	94,202	3,287	805	.....	5,056	57,796	Grand total of supplies into the provinces under the Lieutenant-Governor of Bengal.	54,06,330	53,643	14,180	3,547	5,97,106	1,070,810
24-Pargunnahs	3,00,231	34,942	658	.....	12,611	65,550							
Nudda	4,67,191	840	2,108	31	24,074	37,429	OTHER PROVINCES.						
Jessore	16,650	.....	90	.....	23,469	200	Assam	3,35,388	.....	600	.....	28,314	37
Moorshedabad	1,09,875	1,204	49	96	20,149	55,337	North-Western Provinces and Oudh	16,17,750	6,622	1,859	167	813	492,110
Dinapore	1,22,660	.....	208	.....	7,950	2,475	Punjab	6,98,550	.....	1,207	.....	.....	178,310
Rajshahye	1,78,430	.....	114	.....	10,039	1,629	Central Provinces	57,525	.....	305	.....	.....	16,602
Itanagore	1,19,864	.....	64	.....	11,000	333	Rajputana States	18,125	.....	36	13	.....	32,140
Boora	81,190	.....	42	.....	2,300	6,377	Bombay	26,525	.....	66	.....	.....	1,334,310
Pahna	1,36,120	.....	581	.....	68,050	.....	Madras	21,144	793	822	77	.....	217,710
Darjeeling	140	.....	.....	.....	250	.....	British Burmah	84,629	114	1,184	1,850	.....	1,540,140
Jalpigore	65,000	.....	176	.....	7,050	.....	Other places	6,350	4,801	.....	492	.....	2,001,000
Dacca	5,47,108	1,140	1,711	9	26,010	3,295	Grand Total of exports in Jan.	1882 ... 85,27,316	65,973	20,319	0,155	6,26,232	7,300,100
Furzedpore	3,77,120	6,640	864	75	28,051	4,537	1881 ... 1,19,58,103	1,02,030	21,198	8,490	7,65,601	10,394,110	
Backergunge	89,821	.....	260	.....	27,670	.....							
Myemensingh	.....	.....	65	.....	26,450	.....							
Tipperah	.....	.....	.....	.....	3,125	.....							
Chittakong	96,445	.....	188	4	.....	169,800							
Nokhally	16,430	.....	20	.....	2,076	.....							
Total of Bengal	38,09,348	50,547	9,546	1,236	3,63,569	553,328							
BEHAR.													
	* Rs.	Rs.	Mds.	Mds.	Mds.	No.							
Patna	7,11,275	774	172	85	97,864	228,915	IMPORTED INTO CALCUTTA—	Rs.*	Rs.	Mds.	Mds.	Mds.	No.
Gya	90,075	86	82	48	7,178	17,115	From Foreign Ports—						
Shahabad	1,62,850	.....	22	33	11,941	43,610	United Kingdom	1,07,48,340	.....	17,146	.....	5,16,135	.....
Muzafferpore	1,43,250	.....	.....	.....	7,153	1,760	Other Foreign ports	71,942	.....	626	.....	61,298	.....
Berhampore	1,60,000	516	31	105	17,928	24,800	Total of Foreign trade	1,08,20,282	.....	17,772	.....	5,07,433	.....
Sarbh	.....	.....	.....	.....	1,800	4,660	From Indian Ports—						
Monchy	91,200	172	28	147	15,254	38,300	Bombay	22,148	71,253	.....	17,584	44,632	.....
Bhagulpore	1,22,635	800	11	135	21,013	48,563	Madras	.....	.....	492	.....	.....	.....
Parahat	2,51,830	.....	44	88	6,106	3,330	Other ports in Madras	400	.....	.....	4	638	.....
Maldah	.....	.....	.....	.....	16,401	.....	British Burmah	2,934	.....	.....	.....	.....	.....
Sonthal Pargunnahs	1,90,875	430	23	155	18,724	55,635	Other Indian ports	410	.....	4	.....	.....	.....
Total of Behar	19,14,000	2,838	413	807	2,24,762	444,670	Total of Interportal trade	25,912	71,253	496	17,589	44,270	.....
ORISSA.													
	* Rs.	Rs.	Mds.	Mds.	Mds.	No.							
Balsore	30,282	.....	4,396	709	.....	70,875	Grand Total of imports in Jan.	1882 ... 1,08,46,194	71,253	18,268	17,688	6,12,703	.....
							1881 ... 1,24,60,667	34,719	21,638	8,232	6,76,749	.....	.....

The following Statement shows the several Routes followed by the Trade in the Principal Staples of Traffic exported from Calcutta during the month of January 1882.

SPECIFICATION OF ROUTES.	COTTON PIECE-GOODS.		COTTON TWIST.		Salt.	Gunny-bags.
	European.	Indian.	European.	Indian.		
	Rs.	Rs.	Mds.	Mds.		
By country boats ...	2,84,784	26,457	2,704	.....	3,47,130	183,210
By river steamers ...	6,14,171	.....	2,040	.....	8,389	1,390,750
By rail (East Indian)	50,02,125	13,416	4,463	2,839	2,04,718	60,347
By rail (Eastern Bengal)	16,44,320	8,630	3,251	115	59,164	10,111
By road	3,31,806	11,772	1,273	.....	6,033	8,034,000
By sea	2,50,550	5,708	6,689	3,301	.....	.....
Grand Total of Exports in January	1882 ... 83,27,316	63,973	20,319	6,155	6,26,232	7,300,100
	1881 ... 1,19,58,103	1,02,030	21,198	8,490	7,65,601	10,394,110

\* As per tariff declaration value.

STATISTICAL DEPARTMENT,  
The 6th April 1882.

COLMAN MACAULAY,  
Offg. Secy. to the Govt. of Bengal.

RETAIL PRICES-CURRENT OF FOOD-GRAINS, FIREWOOD, AND SALT IN THE  
DISTRICTS OF BENGAL FOR THE FORTNIGHT ENDING 31<sup>ST</sup> MARCH 1862.



## RETAIL PRICES-CURRENT of Food-grains, Firewood, and Salt in the

		RETAIL SALE:—QUANTITIES PER RUPEE BY																							
		WHEAT.			BARLEY.			RICE, BEST SORT.			RICE, COMMON.			BOLRUSH MILLET— CUMBOO, RAJRA.			GRASS MILLET— CHOLU, JOWAR.								
Number.	DISTRICTS.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.
BENGAL.																									
Western Districts.																									
		S.	Ch.	S.	Ch.	S.	Ch.	S.	Ch.	S.	Ch.	S.	Ch.	S.	Ch.	S.	Ch.	S.	Ch.	S.	Ch.	S.	Ch.	S.	Ch.
		A																							
1	Burdwan	16	0	14	0	16	0	55	0	70	0	40	0	28	8	30	12	27	0	32	4	38	0	29	4
		B																							
2	Bankura	17	0	16	0	19	8	20	0	20	0	22	0	25	0	25	0	25	0	35	0	37	0	32	8
		C																							
3	Beerbhoom	15	0	15	0	18	0							25	8	24	0	26	0	30	0	30	0	30	0
4	Midnapore	14	8	14	8	16	0							20	0	20	0	27	0	28	0	28	0	32	0
		D																							
5	Hooghly	16	0	15	0	19	0							10	0	10	0	10	0	20	0	30	0	20	0
		E																							
	Howrah	13	4	13	0	15	6							17	0	18	0	10	8	22	8	25	0	21	8
Central Districts.																									
		S.	Ch.	S.	Ch.	S.	Ch.	S.	Ch.	S.	Ch.	S.	Ch.	S.	Ch.	S.	Ch.	S.	Ch.	S.	Ch.	S.	Ch.	S.	Ch.
		F																							
	Calcutta	14	0	14	0	15	0	28	14	18	12	21	5	10	0	10	0	6	10	17	12	17	12	18	12
6	24-Pargunnahs	11	8	11	4	11	8	21	4	23	0	21	0	10	0	10	0	10	0	20	0	20	0	19	0
		G																							
7	Nudda	16	13	16	0	16	0	26	0	32	0	32	0	22	15	22	15	20	0	24	10	24	10	22	14
		H																							
8	Jessore	14	0	14	8	16	0							21	8	22	0	21	0	29	0	29	0	28	8
		I																							
9	Moorshedabad	18	0	18	0	19	8							18	0	18	0	22	0	28	0	28	0	32	0
		J																							
10	Dinapore	13	10	12	12	14	8	22	13	22	12	29	1	26	8	22	12	20	0	33	9	30	13	27	0
11	Rajahmbye	18	12	18 8 to 16 0	19 11	45 0	48 12	52 8	21 0	21 0	22 8	25 8	26 4 to 28 12	24 0	25 8	26 8 to 28 12	24 0	25 8	26 8 to 28 12	24 0	25 8	26 8 to 28 12	24 0	25 8	26 8 to 28 12
		K																							
12	Rungpore	12	0	12	0	18	0							16	0	15	0	15	0	25	14	25	14	22	8
		L																							
13	Bogra	22	8	21	0	24	0							18	0	18	0	24	0		31	14	37	6	
		M																							
14	Patna	22	8	22	0	24	0							10	0	10	0	12	0	28	8	28	4	32	0
		N																							
15	Darjooling	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	5	0	15	0	14	0	13	0
		O																							
16	Jalpigoree	9	0	9	0	10	0	20	0	20	0			18	0	16	0	16	0	24	0	23	0	22	8
Eastern Districts.																									
		P																							
17	Dacca	15	0	13	12	13	6	40	0	42	8	45	0	22	1	22	10	28	8	19	0	33	0	35	0
		Q																							
18	Farreedpore	23	0	30	0	20	0	30	0	33	0	30	0	20	0	20	0	7	0	26	0	26	0	24	0
		R																							
19	Hackergunge													24	0	23	0	20	0	29	0	29	0	32	0
		S																							
20	Mymensingh	10	0	10	0	11	12							20	0	20	0	20	0	30	0	30	0	25	0

\* The sub division:—Retail price of salt in Sakhira 11½ seers, Bursichat 9 seers, Baraset 11½

- A In the interior prices range as follow:—Wheat 16 to 18½ seers, barley 37 to 40 seers, best rice 26 seers, common rice 29 to 30½ seers, gram 21 to 31 seers, firewood 120 to 140 seers, and salt 9½ to 13½ seers.
- B In the interior prices range as follow:—Wheat 18 to 18 seers, barley 22 to 35 seers, best rice 22 to 36 seers, common rice 25 to 40 seers, maize or Indian-corn 15 to 52 seers, gram 12 to 24 seers, firewood 160 to 440 seers, and salt 5 to 13 seers.
- C In the interior prices range as follow:—Wheat 15 to 21 seers, best rice 25 to 34 seers, common rice 31 to 38 seers, gram 20 to 35 seers, firewood 160 to 200 seers, and salt 9 to 11½ seers.
- D In the interior prices range as follow:—Wheat 12 to 19 seers, barley 20 to 25 seers, best rice 10 to 26 seers, common rice 20 to 31 seers, gram 16 to 23 seers, firewood 160 to 160 seers, and salt 9 to 13½ seers.
- E In the interior prices range as follow:—Wheat 16 to 26 seers, barley 17½ to 40 seers, best rice 16 to 21½ seers, common rice 24½ to 32 seers, gram 19 to 32 seers, firewood 80 to 200 seers, and salt 10 to 16 seers.
- F In the interior prices range as follow:—Wheat 8 to 11 seers, best rice 9 to 26 seers, common rice 25 to 34 seers, gram 8 to 16 seers, firewood 24 to 4 mounds, and salt 5 to 8½ seers.
- G In the interior prices range as follow:—Wheat 16 to 20 seers, barley 40 to 50 seers, best rice 15 to 26 seers, common rice 25 to 30 seers, gram 28 to 32 seers, firewood 100 to 140 seers, and salt 9 to 9½ seers.
- H In the interior prices range as follow:—Wheat 13 to 15 seers, best rice (in Raigunge) 20½ seers, common rice 30 to 35½ seers, gram 16 to 20 seers, firewood 4 mounds, and salt 9 to 10 seers.

## Districts of Bengal for the Fortnight ending 31st March 1882.

THE SEER OF 80 TOLAHS.															WHOLESALE PRICES PER MAUND OF 40 SEERS.												DISTRICTS.															
LESSER MILLET— RAGI OR MURWA AND CHHURA.			MAIZE OR INDIAN CORN.			GRAM.			FIREWOOD.			SALT.			SALT.																											
Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.																									
B.	Ch.	S.	Ch.	S.	Ch.	S.	Ch.	S.	Ch.	S.	Ch.	S.	Ch.	S.	Ch.	R.A.P.	R.A.P.	R.A.P.																								
...	...	...	...	...	...	...	...	...	25	8	26	0	24	0	166	0	120	0	80	0	13	0	10	12	0	14	2	15	63	5	0	...	Burdwan.									
...	...	...	...	...	...	...	...	...	21	0	21	0	20	0	320	0	320	0	320	0	12	0	0	8	0	0	1	4	0	1	0	...	Bankura.									
...	...	...	...	...	...	...	...	...	27	0	27	0	27	0	180	0	180	0	180	0	10	8	0	0	0	0	3	10	0	4	5	0	...	Beerbhoora.								
...	...	...	...	...	...	...	...	...	19	0	19	0	18	0	160	0	160	0	160	0	10	0	10	0	10	0	3	13	0	3	13	0	...	Midnapore.								
...	...	...	...	...	...	...	...	...	21	0	21	0	21	0	100	0	100	0	120	0	12	0	0	0	0	0	3	2	0	3	13	0	...	Hughly.								
...	...	...	...	...	...	...	...	...	22	8	22	0	20	0	80	0	80	0	80	0	13	0	10	8	...	3	0	0	3	12	0	4	0	0	Howrah.							
																		Central District.																								
...	...	...	...	...	...	...	...	...	20	8	31	14	20	0	22	14	22	14	21	...	90	0	90	0	90	0	13	8	13	1	10	0	2	10	0	3	4	0	1	0	0	Calcutta.
...	...	...	...	...	...	...	...	...	26	8	32	0	25	0	20	0	22	8	19	0	90	0	100	0	90	0	10	12	0	0	0	0	3	0	0	4	0	0	...	24-Pergunnahs.		
...	...	...	...	...	...	...	...	...	26	0	29	0	29	1	...	100	0	120	0	12	13	9	2	10	0	3	0	0	3	12	0	...	Nuddea.									
...	...	...	...	...	...	...	...	...	21	0	20	0	16	8	110	0	110	0	110	0	8	0	8	8	8	0	4	0	0	1	0	0	0	...	Jessore.							
...	...	...	...	...	...	...	...	...	30	0	30	...	32	0	120	0	120	0	120	0	10	0	0	8	...	8	0	3	13	0	3	12	0	...	Moorshedabad.							
...	...	...	...	...	...	...	...	...	10	13	17	8	16	0	180	0	180	0	180	0	...	...	...	...	...	...	3	8	0	4	2	0	...	Dinapore.								
...	...	...	...	...	...	...	...	...	28	0	...	24	0	...	26	4	240	0	240	0	...	...	...	...	...	...	9	6	3	8	0	4	1	8	...	Rajshahiye.						
...	...	...	...	...	...	...	...	...	20	0	20	0	11	4	135	0	135	0	120	0	10	0	10	0	8	12	1	0	0	4	0	0	...	Rangpore.								
...	...	...	...	...	...	...	...	...	19	8	15	0	16	8	67	8	67	8	67	8	11	1	8	10	8	7	3	5	4	4	4	0	...	Bogra.								
...	...	...	...	...	...	...	...	...	22	8	21	5	18	12	200	0	200	0	200	0	13	0	10	8	9	6	3	5	3	10	0	4	7	1	...	Pabna.						
9	0	9	0	9	0	20	0	22	0	16	0	10	0	8	0	8	0	160	0	160	0	160	0	6	0	6	0	4	0	6	0	0	0	...	Darjeeling.							
...	...	...	...	...	...	...	...	...	16	0	16	0	13	5	128	0	120	0	64	0	11	0	9	4	8	0	3	8	0	4	0	0	...	Julpigore.								
																		Eastern Districts.																								
...	...	...	...	...	...	...	...	...	25	0	22	10	20	0	91	4	91	4	108	0	13	0	10	8	9	11	3	0	0	3	12	0	4	2	0	...	Dacca.					
...	...	...	...	...	...	...	...	...	16	0	16	0	13	0	...	...	...	...	...	...	8	0	9	0	9	8	4	3	4	4	3	4	...	Furteepore.								
...	...	...	...	...	...	...	...	...	21	0	21	0	18	8	100	0	100	0	100	0	10	0	8	0	8	12	4	8	0	4	8	0	...	Baonergunge.								
...	...	...	...	...	...	...	...	...	23	0	20	0	18	0	...	...	...	...	...	...	11	8	10	0	9	0	3	8	0	4	0	0	...	Mymensingh.								

Diamond Harbour 8 seers, Dum-Dum 10½ seers, and Barrackpore 11 seers.

I In the interior prices are—Wheat 28½ seers, best rice 12 seers, common rice 26½ seers, gram 10½ seers, firewood 4 maunds, and salt 10½ seers.

J In the interior prices range as follow:—Wheat 16 to 18½ seers, barley (in Bagdogra) 10½ seers, best rice 16 to 24 seers, common rice 21 to 29 seers, lesser millets (in Kurigram) 32 seers, gram 12 seers, firewood 80 to 200 seers, and salt 8 to 9 seers.

K In Serajunge the prices are—Wheat 24 seers, best rice 10 seers, common rice 26 seers, gram 18 seers, and salt 12½ seers.

L In the interior prices range as follow:—Best rice 16 seers, common rice 18 to 22 seers, lesser millets (in Kurseong) 12 seers, maize or Indian-corn 16 seers, gram 12 to 14 seers, firewood 80 to 160 seers, and salt 7 seers.

M In the interior prices range as follow:—Best rice 16 to 20 seers, common rice 16 to 20½ seers, gram 8 to 10½ seers, firewood 60 to 64 seers, and salt 5½ to 9 seers.

N In the interior prices range as follow:—Wheat (in Jafferjunge) 24 seers, barley 52½ seers, best rice 16 to 26 seers, common rice 26 to 29 seers, gram 20 to 30 seers, firewood 80 to 120 seers, and salt 8 to 12 seers.

O In the interior prices range as follow:—Wheat (in Goalundo) 23 seers, barley (in Goalundo) 60 seers, best rice 23 to 29 seers, common rice 26 to 32 seers, gram 13 to 23 seers, firewood 120 to 240 seers, and salt 9½ to 11 seers.

P In the interior prices range as follow:—Best rice 24 to 27½ seers, common rice 26 to 34 seers, gram 10 to 20 seers, firewood 60 to 200 seers, and salt 8 to 11 seers.

Q In the interior prices range as follow:—Wheat 10 to 13½ seers, best rice 10 to 33 seers, common rice 21 to 40 seers, gram 10 to 20 seers, and salt 8 to 11 seers.

## PRICES-CURRENT of Food-grains, Firewood, and Salt in the

		RETAIL SALE:—QUANTITIES PER RUPEE BY THE																													
		WHEAT.			BARLEY.			RICE, BEST SORT.			RICE, COMMON.			BULUR MILET— CUMBOO, RAJRA.			GRAT MILET— CHOLUN, JOWAR.														
Number.	DISTRICTS.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.			
		S. Ch. S. Ch.																													

• In the interior prices of common rice varies from 26½ to 39½ seers per rupee.

R In the interior prices range as follow:—Best rice 24 seers, common rice 26 to 39 seers, firewood (in Cox's Bazar) 214 seers, and salt 8 to 9 seers.

S In the interior prices range as follow:—Best rice 24 to 35 seers, common rice 26 to 40 seers, and salt 6 to 10 seers.

T In the interior prices range as follow:—Wheat 16 to 24 seers, barley 35 to 45 seers, best rice (in Jehanabad) 12½ seers, common rice 23½ seers, lesser millets (in Nowada) 5½ seers, gram 31 to 35 seers, firewood 1½ to 5 maunds, and salt 8 to 10 seers.

U In the interior prices range as follow:—Wheat 16 to 19½ seers, barley 34 to 39 seers, best rice 12 to 15 seers, common rice 18 to 23½ seers, lesser millets (in Buxar) 30 seers, great millet (in Buxar) 29 seers, lesser millets (in Buxar) 41 seers, maize or Indian-corn (in Buxar) 34 seers, gram 27 to 31 seers, firewood 2½ to 9 maunds, and salt 9 to 11 seers.

V In the interior prices range as follow:—Wheat 15 to 16 seers, barley 40 to 46 seers, best rice 12 to 23 seers, common rice 25 seers, maize 37½ to 46 seers, Indian-corn 40 seers, gram 34 to 38 seers, firewood 5 maunds, and salt 10 to 11 seers.

W In the interior prices range as follow:—Wheat 10 to 21 seers, barley 36 to 60 seers, best rice 12 to 30 seers, common rice 29 to 32 seers, lesser millets 40 to 60 seers, maize or Indian-corn 35 to 60 seers, gram 35 to 40 seers, firewood 2½ to 4 maunds, and salt 8 to 10 seers.

X In the interior prices range as follow:—Wheat 14½ to 21 seers, barley 30 to 45 seers, best rice 12 to 22 seers, common rice 27½ to 27½ seers, maize or Indian-corn 40 to 67 seers, gram 17 to 40 seers, firewood (in Hattiah) 210 seers, and salt 8 to 12½ seers.

Y In the interior prices range as follow:—Wheat 13 to 14 seers, barley 37 to 55 seers, best rice 12 to 20 seers, common rice 21 to 24 seers, great millet 40 to 50 seers, lesser millets 45 to 60 seers, maize or Indian-corn 40 to 60 seers, gram 32 to 45 seers, firewood 4 maunds, and salt 9½ to 10 seers.

CALCUTTA,

The 11th April 1882.



## Districts of Bengal for the Fortnight ending 31st March 1882.—(Conold.)

SEER OF 80 TOLAHS

WHOLESALE PRICES  
PER MAUND OF  
40 SEERS.

LESSER MILLET— KASI OR MURWA AND CHHERRA.			MAIZE OR INDIAN- CORN.			GRAM.			FIREWOOD.			SALT.			SALT.			DISTRICTS.																		
Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.																			
S. Ch. S. Ch. S. Ch. S. Ch. S. Ch. S. Ch. S. Ch. S. Ch. S. Ch. S. Ch. R.S.A.P. R.S.A.P. R.S.A.P.																																				
...	...	...	...	...	...	16	0	18	0	16	0	80	0	80	0	10	0	0	0	10	0	3	11	03	12	03	14	0	Chittagong.							
X	...	...	...	...	...	16	0	16	0	16	0	...	...	...	...	8	...	8	8	8	0	4	6	04	8	0	...	Noakhully.								
...	...	...	...	...	...	20	0	20	0	16	0	...	...	...	...	10	0	9	8	3	6	04	0	0	...	...	Tipperah.									
...	...	...	...	...	...	...	...	...	...	320	0	320	0	320	0	8	0	8	0	8	0	4	8	04	8	0	...	Chittagong Hill Tracts.								
...	...	...	...	...	...	13	0	13	0	9	0	...	...	...	...	10	0	8	0	8	0	4	0	04	1	0	...	Hill Tipperah.								
																			BEHAR.																	
...	...	...	50	0	50	0	43	4	42	8	42	8	40	0	130	0	130	0	120	0	9	1	9	1	...	3	15	63	15	6	...	Patna.				
...	...	...	...	31	0	...	28	0	31	0	32	0	140	0	140	...	180	0	11	8	11	0	9	0	3	6	03	10	0	...	Gya.					
...	...	...	39	0	39	0	38	0	{ 30 0 10 0 31 0 }			32	0	40	...	120	0	120	0	140	0	12	0	13	0	9	8	3	2	03	11	0	Shahabad.			
40	0	40	0	38	0	50	0	40	0	50	0	25	0	28	0	29	0	160	0	160	0	123	...	11	6	9	0	9	4	3	10	24	6	10	Durbhunga.	
...	...	...	30	0	40	0	42	8	26	0	27	0	30	0	140	0	140	0	140	0	11	0	11	0	9	8	3	8	03	8	0	...	Mozufferpore.			
32	0	32	0	34	0	40	0	36	0	38	0	32	0	30	0	32	0	160	0	160	0	160	0	11	0	10	0	9	0	3	4	03	8	0	Sarna.	
...	...	...	47	8	...	45	0	24	0	23	0	28	0	...	...	...	9	8	8	12	8	0	4	8	04	8	0	...	Champaran.							
...	...	...	35	0	35	0	52	8	32	0	32	0	33	9	120	0	120	0	128	0	9	0	9	0	8	6	3	13	04	0	0	...	Monghyr.			
...	...	...	40	6	50	8	46	14	27	12	31	9	34	1	138	4	137	8	126	4	11	6	10	1	9	6	3	0	03	1	0	...	Bhagulpore.			
...	...	...	...	...	...	20	0	20	0	23	0	160	0	160	0	120	0	9	0	8	0	8	0	4	2	04	4	6	...	Purneah.						
...	...	...	...	...	...	25	0	24	0	18	0	120	0	120	0	100	0	9	8	9	0	9	0	4	5	04	6	0	...	Maldah.						
...	...	...	40	0	40	0	50	...	22	0	20	0	22	0	200	0	200	0	200	0	9	8	8	0	8	0	4	0	04	8	0	...	Senthal Perghe.			
																			ORISSA.																	
16	12	13	2	18	6	...	...	...	24	15	23	10	23	10	180	0	180	0	160	0	11	0	11	0	11	0	3	8	03	8	03	8	0	Cuttack.		
...	...	...	...	...	...	...	...	...	17	8	17	8	17	8	105	0	105	0	100	0	11	0	11	0	11	0	11	13	6	03	6	0	...	Pooree.		
...	...	...	...	...	...	...	...	...	16	0	16	0	13	6	180	0	180	0	105	0	11	0	13	0	9	4	3	7	04	2	04	6	0	Balasore.		
																			CHOTA NAGPORE.																	
																			South-Western Frontier Agency.																	
30	0	40	0	48	0	30	0	31	0	45	0	23	0	25	0	27	0	240	0	240	0	200	0	9	0	9	0	8	0	3	9	04	0	0	Hazareebaga.	
40	0	40	0	50	0	30	0	30	0	32	0	20	0	20	0	28	0	140	0	140	0	160	0	9	0	0	0	8	0	4	0	04	1	0	Lohardugga.	
...	...	...	...	...	...	...	...	...	21	0	21	0	16	0	160	0	160	0	160	0	8	0	7	0	7	0	4	13	65	8	3	...	Singbhom.			
...	...	...	64	0	...	40	0	50	0	20	0	15	0	22	0	120	0	120	0	140	0	10	8	10	0	9	0	3	8	03	15	0	...	Manbhoom.		

† In Gopalgunge sub-divisions 9 seers.

‡ In the interior prices range as follow:—Wheat 14 to 20 seers, barley (in Soopole) 40 seers, best rice 24 to 30 seers, common rice 25 to 32 seers, lesser millets 50 seers, maize or Indian-corn (in Banka) 40 seers, gram 20 to 28 seers, firewood 100 seers, and salt 9 seers.

21 In the interior prices range as follow:—Wheat 13 to 17 seers, best rice 16 to 25 seers, common rice 25 to 32 seers, gram 14 to 20 seers, firewood 64 to 100 seers, and salt 8 to 9 seers.

22 In the interior prices range as follow:—Wheat 13 to 15 seers, barley 20 to 25 seers, best rice 26 to 32 seers, common rice 30 to 35 seers, maize or Indian-corn 40 to 50 seers, gram 20 to 25 seers, firewood (in Godda) 3 maunds, and salt 9 to 10 seers.

23 In Khurda prices are—Best rice 28½ seers, common rice 34½ seers, gram 21 seers, firewood 100 seers, and salt 19 seers.

24 In the interior prices range as follow:—Wheat 17 to 20 seers, barley 30 seers, best rice 19 to 15 seers, common rice 23 to 25 seers, lesser millets 32 to 50 seers, maize or Indian-corn 30 to 32 seers, gram 23 to 23 seers, firewood 200 to 320 seers, and salt 9 to 11 seers.

25 In Palamow prices are—Wheat 9½ seers, barley 33½ seers, best rice 18½ seers, common rice 21½ seers, burmah millets 54 seers, maize 34½ seers, maize or Indian-corn 38½ seers, gram 22½ seers, and salt 8½ seers.

26 In the interior prices range as follow:—Wheat 13 to 15 seers, barley (in Jhalda) 30 seers, best rice 22½ to 31 seers, common rice 25 to 35 seers, great millet (in Govindpore) 40 seers, lesser millets (in Govindpore) 40 seers, maize or Indian-corn (in Burhabazar) 60 seers, gram 18 to 24 seers, firewood 6 to 30 maunds, and salt 8 to 11 seers.

Published for general information.

COLMAN MACAULAY,  
Offg. Secy. to the Govt. of Bengal.

## WHOLESALE PRICES-CURRENT of Food-grains, Firewood, and Salt in

Number.	MARKS.	PRICES PER MAUND														
		WHEAT.			BARLEY.			RICE, BEST SORT.			RICE, COMMON.			BULBUL MILLET-CUMBOO, BAJRA.		
		Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.
		R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.
1	Calcutta ...	2 14 0	2 14 0	2 10 0	1 8 0	2 2 0	1 14 0	4 0 0	4 0 0	3 0 0	2 4 0	2 4 0	2 4 0	...	...	...
2	Seragunge ...	1 12 0	1 12 0	1 4 0	...	...	...	3 12 0	3 12 0	3 11 0	1 6 0	1 6 0	1 5 0	...	...	...
3	Dacca ...	2 0 0	2 0 0	3 0 0	0 15 0	0 13 0	0 12 0	1 11 0	1 11 0	1 6 0	1 5 0	1 2 0	1 2 0	...	...	...
4	Naraingunge..	...	...	...	...	...	...	1 8 0	1 7 0	1 4 0	1 0 0	1 5 0	1 2 0	...	...	...
5	Chittagong ...	...	...	...	...	...	...	2 5 0	2 0 0	2 8 0	1 12 0	1 12 0	1 0 0	...	...	...
6	Patna ...	2 0 0	2 0 0	1 8 0	0 13 0	0 13 0	0 1 0	2 14 0	2 14 0	3 8 0	1 13 0	1 13 0	1 8 0	...	...	...
7	Balnore ...	2 8 0	3 0 0	2 8 0	...	...	...	1 2 0	1 8 0	1 5 0	1 4 0	1 4 0	1 2 0	...	...	...
8	Pooree ...	...	...	...	...	...	...	...	...	...	1 2 0	1 2 0	1 5 0	...	...	...
9	Cuttack ...	2 5 0	2 2 0	1 11 0	...	...	...	2 0 0	2 5 0	2 5 0	1 5 0	1 5 0	1 8 0	...	...	...

CALCUTTA.

The 11th April 1882.

the undermentioned *Marts* of Bengal for the Fortnight ending 31st March 1882.

OF 40 SHEETS.

GRASS MILLET— CHOLU, JOWAR.			LYCOPHOLM MILLET— RAGI OR MURWA AND CHHAWA.			MAIZE OR INDIAN- CORN.			GRAM.			FINGERWOOD.			BALE.			MARTS.
Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	
R.A.P.	R.A.P.	R.A.P.	R.A.P.	R.A.P.	R.A.P.	R.A.P.	R.A.P.	R.A.P.	R.A.P.	R.A.P.	R.A.P.	R.A.P.	R.A.P.	R.A.P.	R.A.P.	R.A.P.	R.A.P.	
1 4 01 40	1 4 0	...	...	...	...	1 8 0	1 4 0	1 8 01 12 0	1 12 01 14 0	0 6 30 6 30 6 3	2 10 03 4 04 00	Calcutta.						
...	...	...	...	...	...	...	...	...	2 3 0	2 4 02 12 0	...	...	...	3 0 04 0 04 30	Baranagunge.			
...	...	...	...	...	...	...	...	...	1 9 0	1 11 02 00 0	6 00 6 00 6 0	3 0 03 13 04 20	Dacca.					
...	...	...	...	...	...	...	...	...	1 12 0	1 14 02 30 0	8 00 7 0 08 0	3 0 03 12 04 20	Narsingunge.					
...	...	...	...	...	...	...	...	...	...	...	...	...	...	3 11 03 12 03 14 0	Chittagong.			
...	...	...	...	...	...	0 13 30	13 30 15 00 15 0	0 15 01 00 0	5 00 5 00 5 3	3 15 03 15 0	...	Patna.						
...	...	...	...	...	...	...	...	...	2 8 0	2 6 03 00 0	4 00 4 00 5 0	3 7 03 20 4 60	Balassore.					
...	...	...	...	...	...	...	...	...	...	...	...	...	...	3 6 03 6 0	Pooree.			
...	...	...	2 6 03 00	2 10	...	...	...	...	1 8 0	1 9 01 9 00 0	4 00 4 00 4 0	3 8 03 8 03 8 0	Cuttack.					

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COLMAN MACAULAY,  
Offg. Secy. to the Govt. of Bengal.



**Results of the Meteorological Observations taken at the Alipore Observatory from  
2nd to 8th April 1882.**

Month.	Date.	Maximum in sun.	Mean pressure barometer at 32° Fahr.	TEMPERATURE.				HYGROMETRY.				Prevailing direction.	Miles recorded.	Rain.	WEATHER.
				Mean.	Maximum.	Range.	Minimum.	Mean wet bulb.	Vapour tension.	Dew point.	Humidity.				
1882.		°	Inches.	°	°	°	°	°	Inches.	°	%			Inches.	
April	2nd	151.0	29.766	84.7	96.0	19.8	75.2	78.7	0.905	76.2	77	SSW	218	Nil	Day clear, morning and night cloudy, c.
"	3rd	150.7	29.734	85.1	96.5	21.1	75.4	79.4	0.932	77.1	78	SSW	210	"	Day clear, night cloudy, c.
"	4th	150.0	29.642	85.9	97.7	21.9	75.8	79.3	0.916	76.6	75	SSW and S	166	"	Day chiefly clear, night cloudy.
"	5th	153.7	29.737	83.8	97.7	22.4	75.3	78.0	0.831	73.6	72	SSW and variable	80	"	Morning cloudy, day and night clear, c., d., dr.
"	6th	151.4	29.800	81.3	97.0	21.8	75.2	77.0	0.872	75.1	82	S and SSW	122	"	Cloudy, c., d., dr., Ir.
"	7th	150.7	29.794	79.8	97.0	21.6	75.4	75.2	0.815	73.1	80	S and SSW	196	Not measurable	Cloudy, c., s., t., <, /, d.
"	8th	152.7	29.770	81.2	90.7	15.6	75.1	76.4	0.813	74.1	78	ESE and SSW	239	Drift	Cloudy, s., s., t., <, d., Ir.

The mean pressure of the seven days ... inches. 29.750  
 The average pressure of the corresponding period for 24 years, S. G. Office ... 29.780

The mean temperature of the seven days ... ° 83.1  
 The average temperature of the corresponding period for 24 years, S. G. Office ... 84.4  
 The extreme variation of temperature during the seven days ... 22.6  
 The maximum temperature during the seven days ... 97.7

The highest velocity of the wind in one hour during the seven days ... Miles. 22

The highest pressure of the wind on one square foot during the seven days ... lb. 4.0

The mean relative humidity during the seven days ... % 77  
 The average relative humidity of the corresponding period for 24 years, S. G. Office ... 67

The total fall of rain from 2nd to 8th April 1882 ... inches. Nil.  
 The average fall of the corresponding period for 24 years, S. G. Office ... 0.40  
 The total fall from 1st January to 8th April 1882 ... 4.07  
 The average fall of the corresponding period for 24 years, S. G. Office ... 3.20  
 The mean pressure, temperature &c. are deduced from the traces of the Barograph and Thermograph, and from observations made at 6h, 10h, 16h, and 22h.

The maximum and minimum temperatures are obtained from self-registering thermometers. All the thermometers are verified, and the readings have been corrected to a standard constructed and verified at the Kew Observatory. They are exposed under a tent when open at the sides, and are suspended four feet above the ground.

The barometer readings are corrected approximately to those of the standard Newman's No. 86. formerly at the Surveyor-General's Office.

The hygrometric elements are obtained from Tables III, IV, and V of the official tables computed in the Meteorological Office, and based on Regnault's modifications of August's formula.

The direction of the movement of the wind are taken from the trace of a Beckley's anemograph.

The mouth of the rain-gauge is one foot above the ground.

c overcast, = fog, Δ dew, Ir lightning reflection, g gloomy, t thunder, < lightning, / strong wind, d, drizzling rain, K thunderstorm.

METEOROLOGICAL OFFICE, INDIA,  
 The 10th April 1882.

HENRY F. BLANFORD,  
 Meteorological Reporter to the Government of India.

**Abstract of the results of Meteorological Observations taken at the Alipore  
Observatory in the month of March 1882.**

	Inches.	Date.	Hour
The mean pressure of the month ... ..	29.850		
The average pressure of 24 years ... ..	29.869		
The highest pressure during the month ... ..	30.078	12th	10h.
The lowest pressure during the month ... ..	29.561	24th	16h.
The range of pressure during the month ... ..	0.517		
o			
The mean temperature during the month ... ..	80.5		
The average temperature of 24 years ... ..	80.6		
The highest temperature during the month ... ..	99.0	24th	
The lowest temperature during the month ... ..	63.2	3th	
The range of temperature during the month ... ..	35.8		
The mean daily range of temperature during the month ... ..	23.2		
The greatest range of temperature in one day during the month ... ..	30.2	7th	
Per cent.			
The mean humidity during the month ... ..	68		
The average humidity of 24 years ... ..	66		
Inches.			
The mean vapour tension during the month ... ..	0.688		
The average vapour tension of 9 years ... ..	0.702		
The mean cloud proportion of the month ... ..	1.60		
The total rainfall of the month ... ..	0.52		
The total fall of the month indicated by a Beckley's self-registering rain-gauge (mouth of the gauge 50.5 feet above ground) ... ..	0.50		
The average fall of 48 years ... ..	1.34		
The greatest fall in 24 hours ... ..	0.52	29th	
Days.			
The number of rainy days in the month ... ..	1		
The average number of rainy days of 24 years ... ..	4		
o			
The mean maximum equilibrium temperature of solar radiation of the month ... ..	118.6		
The mean difference of sun and air temperatures ... ..	55.5		
The greatest sun temperature ... ..	156.7	27th	
The greatest excess of sun over air temperature ... ..	66.0	27th	
The mean temperature of nocturnal radiation thermometer on woollen cloth ... ..	62.4		
The mean depression of nocturnal radiation thermometer below the minimum of air ... ..	7.4		
The greatest depression of nocturnal radiation thermometer below the minimum of air ... ..	11.7	5th	
Miles.			
The mean movement of the wind per day ... ..	138.2		
The greatest movement of the wind in one day ... ..	329.0	29th	
The greatest movement of the wind in one hour ... ..	25.0	28th noon to 1 p.m.	
The number of hours under each of the 8 points—			

N. 51, NE. 24, E. 23, SE. 19, S. 231, SW. 260, W. 83, NW. 27, Calm 26.

The results of observations at the Alipore Observatory are not rigorously comparable with the registers of past years (at the Park-street Observatory). The barometer is about 8 feet higher at Alipore, and, other things being equal, reads therefore .003 lower. The diurnal range of temperature is also greater at Alipore, and the mean temperature apparently about 2.95° lower; and finally, the thermometer, which has furnished the record of temperature at the Surveyor-General's Office during the last 29 years and upwards, is found to read 0.6 higher than the Kew standard thermometer, which is the standard of reference at the present Observatory.

HENRY F. BLANFORD,

*Meteorological Reporter to the Govt. of India.*

METEOROLOGICAL OFFICE, INDIA,  
The 10th April 1882.

**Results of the Thermometrical Observations taken at the Meteorological Office,  
Chowringhee, from 2nd to 8th April 1882.**

Month	Date.	TEMPERATURE.				HYGROMETRY.				Rain.
		Mean.	Maximum.	Range.	Minimum.	Mean wet bulb.	Vapour tension.	Dew point.	Humidity.	
1882.		°	°	°	°	°	Inches.	°	%	Inches.
April	2nd	84.8	96.8	12.0	77.3	79.9	.924	76.9	77	Nil.
"	3rd	85.4	94.3	21.6	78.8	79.2	.915	76.5	76	"
"	4th	86.7	99.6	22.8	78.8	78.7	.874	75.2	66	"
"	5th	85.4	94.8	21.5	77.3	75.3	.784	70.3	60	"
"	6th	83.5	96.8	21.0	76.8	76.9	.837	73.9	73	"
"	7th	82.7	92.3	14.3	78.0	78.0	.897	76.9	80	"
"	8th	82.9	92.8	17.2	75.6	78.0	.805	72.7	71	"

The mean temperature of the seven days ... 84.5  
 The extreme variation of temperature during the seven days ... 24.0  
 The maximum temperature during the seven days ... 99.6

The mean relative humidity during the seven days ... 72

The total fall of rain from 2nd to 8th April 1882 ... Nil.

The mean temperature and humidity are obtained by applying to the means of the 10h, 16h, and minimum readings a correction dependent on the range, and derived from the hourly observations at the Surveyor-General's Office, Chowringhee, in past years.

METEOROLOGICAL OFFICE, INDIA,  
The 10th April 1882.

HENRY F. BLANFORD,  
Meteorological Reporter to the Govt. of India.

**Abstract of the results of Thermometric Observations taken at the Meteorological  
Office, Chowringhee, in the month of March 1882.**

	°	Date.
The mean temperature during the month	82.6	
The highest temperature during the month	100.0	24th
The lowest temperature during the month	65.4	5th
The range of temperature during the month	34.6	
The mean daily range of temperature during the month	22.7	
The greatest range of temperature in one day during the month	27.9	17th
	%	
The mean humidity during the month	62	
	Inches.	
The mean vapour tension during the month	0.674	
The total rainfall of the month	0.55	
The greatest fall in 24 hours	0.55	
The number of rainy days in the month	1 day.	

HENRY F. BLANFORD,  
Meteorological Reporter to the Govt. of India.

METEOROLOGICAL OFFICE, INDIA,  
The 10th April 1882.

## Weekly Return of Traffic Receipts on Indian Railways.

## EAST INDIAN RAILWAY.

Approximate Return of Traffic for week ended 1st April 1882 on 1,506½ miles open.

	COACHING TRAFFIC.		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings (estimated).	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
Total traffic for the week ...	182,205	Rs. A. P. 2,47,433 5 0	Mds. s. 23,17,098 80	Rs. A. P. 6,96,635 0 0	Rs. A. P. 13,905 11 0	Rs. A. P. 9,03,975 0 0	51,061½	110,477½	167,539½
Or per mile of railway ...	121	164 3 5	.....	462 5 0	13 3 5	609 12 4	.....	.....	.....
For previous 12 weeks of half-year ...	2,552,049½	41,04,007 7 9	2,70,84,021 10	84,30,397 5 3	2,39,507 12 10	1,28,34,872 9 10	675,737	1,475,564½	2,151,301½
Total for 13 weeks ...	2,734,254½	44,12,340 12 9	3,03,91,030 0	91,27,032 5 3	2,59,474 7 10	1,37,94,447 9 10	726,799½	1,602,032	2,319,830½
COMPARISON.									
Total for corresponding week of previous year ...	160,342	2,64,967 0 2	20,14,250 20	5,67,011 7 2	16,922 7 0	9,49,901 4 4	50,505	98,004	148,509
Per mile of railway corresponding week of previous year ...	.....	176 2 4	.....	376 15 0	11 4 0	564 5 4	.....	.....	.....
Total to corresponding date of previous year ...	2,200,507½	34,31,514 3 5	2,62,38,552 30	84,01,190 4 0	2,58,998 1 3	1,20,71,702 8 8	661,870	1,467,340	2,129,210

## EASTERN BENGAL RAILWAY.

Approximate Return of Traffic for week ended 1st April 1882 on 171½ miles open.

	COACHING TRAFFIC.		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings (estimated).	Total earnings.	TOTAL TRAIN-MILES RUN.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
Total traffic for the week ...	55,200½	Rs. A. P. 34,217 0 0	Mds. s. 2,34,176 0	Rs. A. P. 36,133 0 0	Rs. A. P. 1,134 0 0	Rs. A. P. 71,494 0 0	5,849½	7,172½	13,022
Or per mile of railway ...	322	199 0 0	1,365 0	210 0 0	7 0 0	416 0 0	.....	.....	.....
For previous 12 weeks of half-year ...	954,833	3,84,048 0 0	31,03,936 0	5,41,100 0 0	6,336 0 0	9,31,484 0 0	71,736	85,702½	157,538½
Total for 13 weeks ...	1,010,039½	4,18,266 0 0	33,38,412 0	5,77,233 0 0	7,470 0 0	10,02,968 0 0	77,585½	92,903	170,550½
COMPARISON.									
Total for corresponding week of previous year ...	50,369½	29,509 0 0	1,95,060 0	29,887 0 0	1,114 0 0	60,600 0 0	6,162½	5,862½	12,045
Per mile of railway corresponding week of previous year ...	286	168 6 8	1,115 0	170 0 10	6 5 5	344 12 11	.....	.....	.....
Total to corresponding date of previous year ...	603,890½	4,21,304 0 0	27,24,756 0	4,92,654 0 0	6,210 0 0	9,30,168 0 0	76,711½	84,774½	161,486

Included Rs. 196 on account of Revenue stores.

## BENGAL PROVINCIAL RAILWAYS.

Weekly Statement of Traffic Receipts.

No. 9.

Latest return received.	Name of Railway.	Length open.	RECEIPTS FOR WEEK ENDING		TOTAL RECEIPTS FROM 1ST JANUARY		Total increase in 1882.	Total decrease in 1882.	Percentage of increase or decrease.
			5th March 1881.	4th March 1882.	To 5th March 1881.	To 4th March 1882.			
1881.		Miles.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
6th March	Northern Bengal	230	32,302 0 0	41,988 0 0	3,02,848 0 0	3,54,265 0 0	51,417 0 0	.....	+16
4th ditto	Tirhoot	82	11,040 0 0	18,449 0 0	1,00,569 0 0	1,20,572 0 0	20,003 0 0	.....	+19
6th ditto	Patna-Gya	57	9,503 0 0	12,690 0 0	78,570 0 0	1,12,004 0 0	33,533 0 0	.....	+42
4th ditto	Calcutta and South-Eastern	28	2,927 0 0	3,030 0 0	28,734 0 0	32,575 0 0	3,841 0 0	.....	+13
4th ditto	Nalhati	27½	1,562 0 0	1,503 0 0	13,350 0 0	13,257 0 0	893 0 0	.....	+7
	Total	424½	57,324 0 0	73,260 0 0	5,24,080 0 0	6,32,702 0 0	1,09,622 0 0	.....	+20

## DARJEELING-HIMALAYAN RAILWAY COMPANY, LIMITED.

Weekly Statement of Traffic Receipts.

The latest return received.	Length open.	RECEIPTS FOR WEEK ENDING		TOTAL RECEIPTS FROM 1ST JANUARY		Total increase in 1882.	Total decrease in 1882.	Percentage of increase or decrease.
		5th March 1881.	4th March 1882.	To 5th March 1881.	To 4th March 1882.			
4th April 1882	50	Rs. A. P. 3,645 0 3	Rs. A. P. 7,883 15 8	Rs. A. P. 22,601 12 5	Rs. A. P. 47,046 11 10	Rs. A. P. 24,444 15 5	.....	+23 (proportional).

Calcutta, 5th April 1882.

• Length open 80 miles.

GILLANDERS, ARBUTHNOT &amp; Co., Secretaries.





# SUPPLEMENT TO The Calcutta Gazette.

WEDNESDAY, APRIL 19, 1882.

## OFFICIAL PAPERS.

*Non-Subscribers to the GAZETTE may receive the SUPPLEMENT separately on payment of Six Rupees per annum if delivered in Calcutta, or Twelve Rupees if sent by Post.*

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## Proceedings of the Council of the Lieutenant-Governor of Bengal for the purpose of making Laws and Regulations.

*Saturday, the 15th April 1882.*

### PRESENT:

HIS HONOR THE LIEUTENANT-GOVERNOR OF BENGAL, *Presiding.*  
 The HON'BLE A. PHILLIPS, *Officiating Advocate-General.*  
 The HON'BLE H. L. DAMPIER, C.I.E.  
 The HON'BLE H. J. REYNOLDS.  
 The HON'BLE M. A. COCKERELL, C.S.I.  
 The HON'BLE D. M. BARBOUR.  
 The HON'BLE T. T. ALLEN.  
 The HON'BLE AMEER ALI.  
 The HON'BLE BHUDEB MOOKERJEE, C.I.E.,  
 and  
 The HON'BLE MOULVIE MAHOMED YUSUF.

### EMBANKMENTS AND WATER-COURSES.

THE HON'BLE MR. DAMPIER said that before moving that the Bill to amend the law relating to embankments and water-courses be passed, he might just mention that it had occurred to him that it would be better to put the penal sections of the Act into a separate part by themselves. Part VII was a miscellaneous one and was very lengthy, containing a variety of provisions besides the penal clauses, and it was usual to put the

penal sections into a Part by themselves. He therefore proposed that the Secretary be instructed to do this. Then there was an amendment just brought to Mr. DAMPIER's notice in section 94, which made certain parts of this Act applicable to Orissa. Section 18 was one of the sections which were extended by section 94. That section had two clauses, but clause (a) he found was already contained in the Orissa Act, and clause (b) was unnecessary; therefore his first amendment in section 94 was to omit the figures "18." The other amendment was this—Section 76 was one of the sections to be extended to Orissa, and it was proposed to add to section 94 the words "the words 'Superintendent of Embankments' being substituted for the word 'Collector' in clauses (a) and (b) of section 76." Section 76 was the penal section which provided that when a tract of country had been notified by the Lieutenant-Governor, alterations might not be made without the sanction of the Collector (as the Bill now stood), but in Orissa the Superintendent of Embankments would be the officer whose permission would be necessary.

The amendments were severally agreed to

On the motion of the HON'BLE MR. DAMPIER the Bill was then passed.

#### AMENDMENT OF THE EXCISE ACT.

The HON'BLE MR. REYNOLDS moved that the Bill to amend the Bengal Excise Act, 1878, be read in Council.

The motion was agreed to.

The HON'BLE MR. REYNOLDS also moved that the Bill be referred to a Select Committee, consisting of the HON'BLE MR. ALLEN, the HON'BLE AMEER ALI, the HON'BLE MAHOMED YUSUF, and the Mover, with instructions to report in a fortnight. He explained that the Bill, as introduced, was of so simple a character, being nothing more than a verbal amendment of the law, that he had intended to ask the Council to dispense with the formality of referring the Bill to a Select Committee, and to pass the Bill that day. But since he had taken charge of his office at the Board of Revenue, he found that his predecessor had proposed four or five other amendments of the law, some of them of a more important character than those contained in the Bill. He therefore thought it necessary that the Bill should be referred to a Select Committee.

The motion was agreed to.

#### ADJOURNMENT OF THE COUNCIL.

HIS HONOR the PRESIDENT adjourned the Council for a fortnight, and in doing so he said:—"Before that day arrives, I shall have left India and made over office to my successor. Therefore, before leaving, I wish to take this opportunity of saying farewell, and of thanking you for the very great assistance you have given me in the work of this Council. We have not attempted to legislate in this Council merely for the sake of legislation, and we have introduced no measures into the Council until they have been proved to be necessary, either for administrative purposes or in consequence of distinct demands from the public; and we have, as long as I have known the Council, attempted to keep rather behind than in advance of the public demands for legislation. But I think our Statute-book shows that we have passed some very useful measures during the last few years. Our sittings here have not been very lengthy or tedious, but they really represent a very small portion of the time which has been given up by you to the irksome and severe work of sittings in Select Committee. You all know how very much of the time of members is taken up in this way, and that it is done with great sacrifice, all of you having other duties to attend to."

The Council was adjourned to Saturday, the 29th instant.

## EXTENSION OF LOCAL SELF-GOVERNMENT.

FINANCIAL DEPARTMENT.—LOCAL GOVERNMENT—No. 9214.

*Calcutta, dated the 8th April 1882.*

From—COLMAN MACAULAY, Esq., Officiating Secretary to the Government of Bengal,

To—The Secretary to the Government of India, Department of Finance and Commerce.

I AM now directed to acknowledge the receipt of your letter No. 3513, dated 10th October, on the subject of the further extension of local self-government in Bengal. Sir Ashley Eden has given this question his most careful consideration, and he has had before him the opinions of the local officers of his administration as well as those of various public bodies in this province. The conclusions at which he has arrived are stated in the following paragraphs.

2. Sir Ashley Eden has no doubt of the soundness of the general policy of extending local self-government in Bengal, and he believes it to be at once the duty and the interest of Government to promote among the people a genuine and intelligent concern in the management of local affairs and the development of local institutions. But he is convinced that, if this policy is really to succeed, it must be introduced with the utmost caution, and that any attempt to force suddenly upon the country at large an elaborate system of administration based upon the practice of Western nations and foreign to all the traditions and ideas of the people, must necessarily result in failure. The first question, therefore, which he has had to consider is whether the legislation which will be needed to confer the necessary powers on local bodies in advanced districts could contain provisions so graduated that some at least might be extended to all districts. After careful consideration he has come to the conclusion that this would not be possible, and in this opinion a number of experienced officers whom he has consulted unanimously concur. In a province like Bengal, which contains districts representing many different stages of development and education, no single system of local self-government could be administered with success. Pooree and Chumparun differ as much from Singbhoon and the Chittagong Hill Tracts on one side as they differ from Hooghly and the 24-Pergunnahs on the other. If the measure were uniform, it would fail by being either too elaborate for the backward districts or too simple for the more advanced. If it provided in itself for too many gradations, it would be unwieldy. In the Lieutenant-Governor's opinion we should provide for the gradual advance of backward districts by improving existing machinery and enlarging the powers of local bodies, as far as may be considered advisable, by executive order. For advanced districts one comprehensive measure should be enacted providing for all the branches of local self-government.

3. It is unnecessary at this stage to specify the districts to be placed under the first category. They will probably be those comprised in the Chota Nagpore, Orissa, and Chittagong Divisions, and some of those comprised in the Patna, Bhagulpore, Rajshahye, and Dacca Divisions. The three districts to which the Cess Act does not apply—Singbhoon, the Sonthal Pergunnahs, and the Chittagong Hill Tracts—will of course not be affected. The Lieutenant-Governor trusts that, as time goes on, the number of districts admitted to the larger measure will gradually increase. Meanwhile he considers that the following policy should be adopted. The Committees

constituted under the Cess Act should be carefully revised and strengthened, inactive members being eliminated and members added who will consent to take a genuine interest in the administration of the district affairs. To these Committees should be entrusted provisionally the maintenance of all Provincial Roads, of Staging Bungalows, and of such other buildings as the Department of Public Works may find it possible, in consultation with the Committees, to place under their management. The existing District Education Committees should be abolished and their functions transferred to the Committees already entrusted with the administration of the Road Cess. These functions would be considerably enlarged. They would extend to some control over the grant for primary schools, and over the grant-in-aid allotment, and to the management of Government secondary schools and circle schools, and of Government high English schools. The Committee would also be vested with the management of all dispensaries outside municipal limits which now receive aid from Government. They would have the charge of all school and dispensary buildings in cases where the institution was under their charge. A fixed grant would be made representing the present expenditure on the services entrusted to the Committees, less the net proceeds of ferries and pounds in the district. The latter sources of income would be made over to them, but the administration of ferries and pounds could only be confided to bodies appointed under the new Act. It would be understood that ample powers of inspection would be reserved to Government, and that, in the event of the duty not being satisfactorily performed, the whole or a part of the grant or of the Committee's powers might be withdrawn. In some districts it might not be possible to give such large powers, but this is the general scheme that Sir Ashley Eden would wish to try in districts which are not yet sufficiently advanced for a more elaborate measure. As the new law cannot come into force for some months he would apply this executive measure at once to all districts, extending the new law afterwards to such districts as may be considered suitable for its application. Orders in this matter will not, however, be immediately issued, as Sir Ashley Eden does not consider that it would be proper for him, immediately before laying down the Government, to commit his successor to such a large measure of policy.

4. The law embodying the more elaborate measure of local self-government should be framed on the model of the General Municipal Act, with provisions under the various heads, which could be extended or withdrawn by executive order. One chapter would deal with public works, and would take the place of Chapters VIII to XII of the Cess Act, which chapters would, on the extension of the new Act to any district, cease to be in force in it. Another would deal with sanitation, a third with medical charity, and so forth. The Lieutenant-Governor now proceeds to explain the details of the legislative measure which he would propose.

(1.)—*Constitution of Boards.*

5. If any practical result is to be obtained from the extension of local self-government, it is essential that the unit of administration should be the *Local* or Sub-divisional Board, and not the *District* Board. The District Board should have the general control of the scheme of district work; it should have the allotment of funds, and it should direct the policy of the district as a whole. But the details of local self-government can only be performed by working local bodies with limited areas of jurisdiction. Where these cannot be formed, as much use as possible must be made of District Committees; but it is only to districts in which they can be formed that a detailed scheme such as is now under consideration can with any advantage be applied. It is quite impossible that the affairs of a district in many departments can be efficiently managed by a body of men meeting six or eight times in the year at the head-quarters station. The distances are too great, and the number of possible meetings would be too small, to admit of thorough control by the Board at large, and it would be hopeless to look for sustained interest on the part of the members in the details of business conducted on such a system. One of two evils would be inevitable,—either meetings would be held at long intervals, when the work could not be properly done,—or meetings would be held at short intervals, when members from outlying places would be practically excluded, and the work of the Board would



fall into the hands of the members who reside at or near the head-quarters station. Some officers propose to have departmental sub-committees to conduct the executive business of the District Board in the different branches during the intervals between its meetings. This, however, would only stereotype the second evil just referred to. These sub-committees must meet frequently, and only members residing at or near the head-quarters station—certainly in the head-quarters sub-division—could attend meetings frequently. A few members, therefore, from the head-quarters station and its neighbourhood would do all the executive work of the District Board, merely reporting to, or taking orders from, the general body six or eight times a year. The members from the interior of the district would be deprived of all concern in the working of the business of local self-government. Yet it is this concern, and not the privilege of voting or debating at meetings held a few times in the year, that we wish to secure to them in order that they may learn to administer their own public affairs. What is required is a Local Board for each sub-division, inclusive of the head-quarters, each Local Board doing the work of its own sub-division under the general control of the District Board, and periodically referring to it questions of district importance and applying to it for the allotment of district funds. It is certain that sub-committees at the head-quarters and Local Boards at sub-divisions could not work together. If we have the one, we must abandon the other. If we have the former, we give local self-government to the head-quarters sub-division only, and we exclude the other sub-divisions indefinitely from it. If we have the latter, we give all the sub-divisions the same privilege. The Lieutenant-Governor has therefore made the Local or Sub-divisional Board the basis of his scheme.

6. The non-official section of each *Local Board* should consist of two members from each thanmah, if possible, or, if this cannot be secured, of a number of members calculated on that proportion. The Chairman should be, in the head-quarters sub-division, a Joint, Deputy, or Assistant Magistrate, nominated by the Magistrate of the district; in other sub-divisions the sub-divisional officer. The High Court have very properly objected to judicial officers holding posts involving so much executive responsibility as the vice-chairmanship of a Road Cess Committee. It is quite essential that the head of the Local Board should be an officer of Government accustomed to the transaction of public business. Without this, confusion and neglect would inevitably occur. The ample representation of non-official members on the Board would render it impossible for the Chairman to monopolize its powers. The only *ex-officio* member of the Local Board besides the Chairman would be the Deputy Inspector of Schools. Each Local Board should elect its own Vice-Chairman. The general proportion on Local Boards throughout the district should be not less than two non-official members to one official member. Endeavours should be made to secure this proportion on each Local Board; but there might be cases where this would be inconvenient, and it would be sufficient to ensure that in the aggregate of the members of Local Boards throughout the district the proportion of not less than two-thirds and one-third is observed.

7. As a general rule appointment to Local Boards must be by nomination—by Government in the first instance, and by Government or the Board itself on the occasion of vacancies. Objections have recently been taken in one important municipality to an invitation to nominate members for the approval of Government. It might, however, be provided that in certain cases Local Boards might be authorized to nominate, for the approval of Government, members to fill vacancies, the votes being taken by ballot. The members first appointed should remain in office for three years. Afterwards members should retire in rotation, one-third every year, but retiring members should be eligible for re-appointment.

8. Though, however, as a general rule, appointment must be by nomination, Sir Ashley Eden considers it very desirable that some provision should be made for election. If this were omitted the measure would not be complete, and, with the safeguard of a property qualification for voters and candidates, the experiment might well be tried in one or two places. The qualification for voters might

be the payment of Rs. 25 road cess or Rs. 20 license tax, or proof, to the satisfaction of the Magistrate of the district, of income from other sources than land amounting to not less than Rs. 1,000 per annum. For candidates Sir Ashley Eden would insist on the possession of landed or house property within the area to be represented of the value of not less than Rs. 1,000 per annum. It is important that representatives of rural areas elected under the Act should have a substantial stake in the locality which returns them. The experiment might be tried in one or two thannahs in the Hooghly, Howrah, or the 24-Pergunnahs Districts. If it failed, the provision might be withdrawn from the place in question, and no harm would have been done. To extend the system of election indiscriminately, however, would be to court failure. The people at large would take no interest in the elections, and there would be a serious danger of the work passing into the hands of men who would throw discredit on the system.

9. The District Board should consist of two delegates elected by each Local Board, where the jurisdiction of the latter extends over not more than three thannahs, of three where it extends over four thannahs, and of four where it extends over more than five. As the District Board will have control over education in municipalities and over provincial and district roads passing through them, municipalities should be duly represented; two delegates being sent by each first class municipality and one by each second class municipality with a population of 5,000 or more. The proportion of official to non-official members being observed in regard to the aggregate number of members of Local Boards and the delegates being elected by their own Boards, it is unnecessary to insist on any fixed proportion being observed on the District Board. It would be inconvenient to secure this, and to attempt it would be at once to invade the right accorded to the Local Boards of electing their own delegates. The Chairman of the District Board should be the Magistrate of the district. The

Local Boards.		District Board.	
Head-quarters Sub-division—		Ex-officio.	Chairman ... .. 1
Chairman ... ..	1		Four Chairmen of Local
Members (2 each from 8 thannahs) ... ..	16		Boards, District Superintendent of Police, Civil Surgeon, and Deputy Inspector of Schools ... .. 7
	17	Delegates—	
Raneegunge—		Head quarters (8 thannahs) ...	4
Chairman ... ..	1	Raneegunge (3 " ) ...	2
Members (2 each from 3 thannahs) ... ..	6	Cutwa (3 " ) ...	2
	7	Culna (3 " ) ...	2
	—	Burdwan Municipality (1st class) ...	2
Ontwa—		Dainhat Municipality (2nd class) ...	1
Chairman ... ..	1	Raneegunge Municipality (2nd class) ...	1
Members (2 each from 3 thannahs) ... ..	6	Cutwa Municipality (2nd class) ...	1
	7	Culna Municipality (2nd class) ...	1
	—		
Culna—			
Chairman ... ..	1		
Members (2 each from 3 thannahs) ... ..	6		
	7		
	—		
		Total ... ..	24

Chairmen of all Local Boards, the District Superintendent of Police, the Civil Surgeon, and the Deputy Inspector of Schools should be the only other *ex-officio* members. The Sanitary Commissioner, the Inspector or Assistant or Joint Inspector of Schools, and the Divisional Superintendent of Works should be entitled to attend meetings of the District Board, but they should have no vote. An example of the application of these proposals is given in the margin. It will be seen that the District Board consists of 24 members, of whom only 8 hold their appointment *ex-officio*.

10. The Lieutenant-Governor has said that the Chairman of the District Board should be the Magistrate of the district. This is an indispensable condition. The District Officer is the mainspring of the administration, and it is absolutely essential that his position should be upheld in its integrity. Experiments in local self-government will be very valuable as a means of educating the people in the conduct of affairs, but they must not be allowed to weaken the frame-work of Government. In the day of trouble Government must look to its District Officers, and not to District Boards, to uphold its authority and carry out its orders. There is no reasonable doubt, moreover, that the great mass of the people would have no confidence in any system of management from which the head of the district was excluded, or in which he held a subordinate place, and that they would attach no prestige to a Board constituted

under such a system. Any one who knows the country knows that the District Officers possess in a remarkable degree the confidence and respect of the people.

The District Boards should elect their own Vice-Chairmen, subject to the approval of Government.

(2).—*Departments and Funds to be administered by Boards.*

11. The next question is the funds to be made over to the Boards and the departments of the Administration to be entrusted to their management.

12. *Provincial Roads* would be made over in all cases. These roads are very important lines of District, as well as Provincial, communication; in many cases they pass through the head-quarters of the district, and the people of the district are keenly interested in their maintenance in good order. Ample checks, it will be observed, are provided further on. As a rule *Provincial Buildings* could not be made over with any advantage, though in particular cases, where small works had to be carried out and there was no provincial establishment, it might be possible for the Public Works Department to enter into arrangements with the District Boards, paying them of course for the services of their staff. Under Act VI (B. C.) of 1880 the *Drainage* Commissioners appointed to carry out any scheme must number not less than seven, of whom at least four must be holders of lands to be affected by the scheme or managers on behalf of such holders. As such schemes affect not only the productiveness of the lands drained, but also the salubrity of the surrounding country, it might be convenient to appoint the Local Board, or one of the subordinate Committees to be referred to further on, to be Commissioners under the Act. It is also proposed that in some districts the maintenance of *Embankments* and the control of *Irrigation* works should be entrusted to the Boards. As in the case of *Provincial Buildings*, however, no absolute rule could be laid down in these cases, and it will be sufficient to take a general power under the Act.

13. *FERRIES* are obviously a branch which could well be transferred to local management. This would necessitate a change in the law for districts brought under the new Act. At present some municipalities enjoy a very large income from ferries. In the Lieutenant-Governor's opinion, however, when a ferry is situated on a District Road, even if it lies within municipal limits, the proceeds should, as a rule, go to the District Board, which should be charged with the general control of district highways, contributing funds to Local and Municipal Boards for the maintenance of such portions of the roads as fall within their respective jurisdictions. Power, however, should be reserved to Government to direct a special distribution in special cases.

14. Except in districts where indigo quarrels might be embarrassing, *POUNDS* are eminently a branch which could with advantage be entrusted to the control of Local Boards. There is no doubt that a vast amount of extortion is practised in the interior in regard to impounded cattle. The gomashita's cutcherry is largely used as a pound, and cattle-trespass fines form not the least of his perquisites. If pounds were more numerous, and were made over to the management of local punchayets, large sums that are now appropriated by zemindari officials would be made available for sanitation and public purposes. The proceeds should be strictly spent on roads or other improvements within the area served by the pound, under the system referred to below. This, it is to be observed, would require an alteration of an Imperial Act.

15. One of the most important functions that the Local Boards could perform would be the gradual improvement of *VILLAGE DRAINAGE, VILLAGE SANITATION, and VILLAGE WATER-SUPPLY*. Simple provisions could be inserted in a special chapter, and the Local Board of any place to which the chapter might be extended could be authorized to frame bye-laws and publish them after confirmation by Government. Mr. Beames, Commissioner of Burdwan, gives the following very interesting account of a system under which some punchayets

raise subscriptions from the villagers and apply them to village sanitary improvements and roads:—

In some parts of the Serampore sub-division there are very large and populous villages, among the inhabitants of which are many gentlemen of high intelligence and business habits. Some are retired officers of Government, others are pleaders and merchants, who go daily to their places of business in Calcutta. These gentlemen have undertaken the office of punchayet under the Village Chowkidari Act, and finding a very great demand and necessity for sanitary improvements in their villages have availed themselves of the influence acquired by their appointment to induce the villagers to subscribe for such purposes. They have built culverts, made roads, and drained dirty places—all with funds freely contributed by the villagers. No possibility of oppression exists, as the villagers from daily contact with the outer world are far too well aware of their rights to permit themselves to be oppressed.

Here and there a refractory villager refuses to subscribe, or cannot be induced to sacrifice some little corner of his holding for the purpose of making a drain, or refuses to put a stop to some nuisance which is offensive to his neighbours, on the ground that the punchayet has no legal authority. The sub-divisional officer, Mr. Carstairs, has in all cases supported these enterprising punchayets in every legal manner; but both he and they feel that some authority from Government is necessary to enable them to carry out the wishes of the majority. They do not wish to be made into municipalities or even unions, not being prepared to bear the burden or undergo the labour involved in maintaining municipal institutions. All that is necessary is that some addition should be made to the Village Chowkidari Act, or a chapter added to the Municipal Act.

This beginning, modest though it is, promises good results, and the chapter of the law relating to this subject might legalize the levy of subscriptions for these purposes up to a fixed maximum. The punchayets could then take the form of the subordinate committees, to which reference will be made in the next section. In order to help the funds raised for these village improvements, the Lieutenant-Governor proposes to make over, with the management of pounds the receipts from this source, without any corresponding reduction of the general district grant. The net revenue thus sacrificed, if this system were adopted throughout the Burdwan and Presidency Divisions, would be about Rs. 60,000. This would be a substantial contribution to village improvement, and the Lieutenant-Governor considers that it would be a judicious sacrifice of revenue.

16. There is no head of *MEDICAL* receipts that could with any advantage be made over to the District Boards. The heads are "*Medical College Fees*," "*Hospital Receipts*" (Calcutta and Lunatic Asylums), "*Lunatic Asylums*" (sale proceeds of manufactures), "*Medicines, &c., of Civil Surgeons*," "*Contributions*," and "*Miscellaneous*." In regard to their own hospitals and dispensaries, however, District Boards might be empowered to fix a charge for paying patients, and they might have legal power, such as the English law gives (section 132), to recover from a patient who is not a pauper any expenses incurred in maintaining him in the hospital. The only part of medical expenditure that can be made over to them is the present expenditure of Government on hospitals and dispensaries outside municipalities. This should be made over to them as a fixed grant. They would still work through local Dispensary Committees. They would appoint their own medical officers from the Government list, subject to the approval of the Surgeon-General. They would be required to submit to the Surgeon-General, through the Civil Surgeon, such returns as might be required by Government. The officer appointed might be the medical officer attached to a sub-division. In that case the Board could pay him such allowances as Government might direct.

17. Under *EDUCATION* the Lieutenant-Governor proposes to invest the District and Local Boards with extensive powers. Indeed, the only branches over which they would have no control would be colleges, attached collegiate schools, normal schools, with attached model schools, medical schools, surveying schools, madrasahs, and schools for Europeans and Eurasians. Normal schools, being concerned with the training of teachers, should remain within the control of the Department, and indeed they are specially reserved to the Department under the Education Despatch of 1854. Schools of medicine and surveying, and madrasahs, are of too special a kind to be transferred. The high schools attached to colleges and the model or practising schools attached to normal schools are usually held in the same building as those to which they are attached, and must therefore necessarily remain under the same management.



It is proposed to transfer to the Local Board all the authority over *primary schools* now exercised by the District Magistrate, subject only to the general control of the District Board and of the Director. Consequently, no change of system in the administration of the primary grant would be made without the sanction of the District Board and of the Director. Subject to that condition, the functions of the Local Board would extend over the whole field of administration, under the system as sanctioned. The Board would have the Deputy Inspector as its adviser and the Sub-Inspector as its agent. It would undertake the inspection of primary schools, conduct all ordinary examinations, and, subject to the general control of the District Board, determine all grants. Its action in all matters relating to the administration of the primary allotment would be determined by definite rules, to be drawn up by the District Board under the sanction of the Director. All bills payable from the primary allotment would be passed by the Local Board, after countersignature by the Deputy Inspector.

A certain number of primary schools, chiefly under missionary management, receive grants-in-aid, and they may conveniently come under the same management as the aided secondary schools. The following rules, therefore, would refer generally to the administration of the *grant-in-aid allotment*. Every application for a grant, whether monthly or special, would be submitted to the Local Board, which, after such enquiry through the Deputy Inspector as might be deemed necessary, would forward it to the District Board. The District Board, on the report of the Local Board, would then deal with the application; and if it sees fit, would recommend a certain establishment, with a certain grant, to the Inspector. Should the Inspector accept the Board's recommendations, the Board would issue its sanction to the grant. Should they be unable to agree, the case would be referred to the Director for decision. The sanction to the grant would in every case be issued by the District Board. A statement should be drawn up by the District Board every year, showing for each school and each class of schools the grants in force or proposed for the ensuing year. A copy of this statement should be sent to the Inspector and the Director. For the purpose of this statement, the Deputy Inspector should lay before the Board an abstract of the results of the scholarship examinations of the three preceding years, so that the Board might know which schools were improving and which falling back, and regulate its grants accordingly. But each school should be dealt with separately, and no grant should be increased or reduced without the Inspector's (or in the last resort the Director's) sanction. The District and Local Boards would not generally interfere in the internal management of aided schools. The courses of study and standards of examination would be prescribed by the Department, and the managers of each school would be free to choose its own text-books out of the authorized list issued by the Central Text-Book Committee under the sanction of the Department. But the Local Board would always have authority to enquire into complaints of mismanagement—for example, complaints by teachers of delay in paying salaries; and the District Board, on the report of the Local Board, might suspend a grant pending enquiry. It might also suspend a grant on the Inspector's recommendation to that effect after visiting a school; but no grant should be cancelled without the agreement of the District Board and the Inspector. In case of disagreement the Director would decide. The appointment of every teacher in an aided school would be subject to the approval of the Inspector. The bills for grant-in-aid would be passed every month by the District Board after countersignature by the Deputy Inspector, and would be payable at the treasury.

With *Government vernacular schools* may be included, firstly, the few Government *primary schools* established in backward places; and, secondly, those (so-called) Government middle English schools which are really vernacular schools, with an English class attached at the expense of the pupils. These schools would be transferred to the management of the Local Boards to be administered either directly or through a Committee. The theory of them is that they are the pioneers of education above the primary standard in backward places where the grant-in-aid

system will not apply. There is, therefore, in general no certainty of a local Committee being formed. If in any place the materials of such a Committee exist, its formation should be encouraged; and in that case the management of the school should be made over to the local Committee under special rules. It would be provided that the course of instruction and standards of examination should be settled by the Department, and that no teacher could be appointed without the approval of the Inspector, who would see that the teachers trained in his normal school were properly provided for. When a school is either declared to be unsuccessful, or is judged to have fulfilled its purpose by paving the way for an aided school, it is removed, with its staff and grant, to another backward village. This removal the District Board would effect. Subject to the sanction of the District Board and of the Inspector, the Local Board would fix or modify the scale of establishment, within the limits of the net grant, appoint teachers, and permit the addition of an English class at the expense of the pupils. The balance in favour of each school would be placed to its credit for the following year; and the District Board might either spend it upon the particular school, or transfer it to another school of the same class in the district which might not have sufficient funds for its requirements. The monthly bills of each school would be passed by the Local Board after counter-signature by the Deputy Inspector.

The management of *Circle schools* would follow that of Government vernacular schools, it being provided that the circle grant should be strictly confined to its legitimate purpose, namely, the raising of private pathshalas to a higher standard by means of itinerant Government teachers. The grant should not in any case be merged in the primary allotment. But as in some divisions these teachers have a separate gradation system of their own, extending over several districts, it would be necessary to arrange for transfers of funds by the Director, on the report of the Inspector, so as to provide for promotions.

The chief administrative difficulty in the way of transferring *High English* or *Zillah* schools to the direct management of the Boards arises from the fact of the teachers being borne on the graded list. There can be no doubt, however, that the power of managing these schools would be specially appreciated by the Boards. The difficulty may, perhaps, be overcome by the following provisions. The inspecting staff should be separated from the teachers on the graded list. The Boards would be required to appoint to vacancies teachers from the graded list so long as candidates considered eligible by the Director were available. Promotions would be given from grade to grade successively, and the Director of Public Instruction would have a power of veto on all nominations by the Boards, whether from the graded list or not, for reasons to be stated by him. The Local Boards would have charge of all high English schools except those situated at the head-quarters of a district. These would be under the immediate management of the District Board, who might delegate its functions to a special sub-committee. The Boards would have authority to suspend, reduce, or dismiss any teacher with the sanction of the Director. The standard of the final examination in zillah schools is fixed by the University, and the course of study throughout the classes is settled by the Inspector. These arrangements should continue. But the Board should be empowered to make recommendations and proposals affecting these excepted points.

At the same time these arrangements must be considered as provisional only. The Boards would not in any way correspond to the idea of "private effort assisted by grants-in-aid," which is foreshadowed in the Despatch of 1854 as the educational policy of the future. They would still be in a measure Government Boards: partly or wholly appointed by Government, disposing of Government funds, and dealing directly with the Government treasury in respect of the allotments made to them. What is ultimately required is private Committees constituted *ad hoc*; associations of private persons interested in the maintenance of the high school, and ready and able, if need be, to relieve Government of its direct management. Out of about 200 high schools for natives, only 48 are Government schools; and it is difficult to believe that private associations cannot, at the head-quarter stations of districts, undertake those duties of management and control which are discharged without difficulty in much smaller and less important towns. It would be provided, therefore, that

Government might at any time give notice that after a certain term of years it would withdraw from the direct management of the local school and transfer it to private control.

The Lieutenant-Governor has considered the question whether the zillah school at head-quarters might not be made over to the management of the municipality. On the whole he considers it desirable that the District Board should have control over education generally throughout the district, and over this class of schools in particular. The zillah school, though generally situated within a municipality, cannot be regarded as a local school in the sense in which a pathsala or Government vernacular school within municipal limits is a local school. Unlike the latter class of schools, it draws its supply of pupils from the whole district. Indeed, its name indicates that it is intended to be a district school, and not a mere local town school. Probably in any case a majority of the pupils are residents of the municipality; but it may be conjectured that the fact that the municipalities of Bengal contributed only Rs. 70 to the support of zillah schools in 1880-81 is attributable to the knowledge that the school exists for the benefit of the district and not of the town only.

But while the zillah school is really a school for the whole district, it is at the same time indisputable that the municipality benefits greatly from its establishment. At least one-half of the pupils of every zillah school are residents of the Municipality, and in some cases a larger proportion. The Lieutenant-Governor, in taking over the cost of the police of municipalities, declared that municipal funds would be required to contribute to the support of schools situated within municipal limits. The Director will now be requested to fix the contribution to be made, calculated on the proportion of pupils resident in the municipality to the gross number of pupils in the school. The Government grant to the District Boards will be reduced by this amount. The exact amount to be contributed for each school should be annually revised on the same principle.

With regard to education of other kinds, middle and primary, it should be the duty of the District Board to enquire into the sufficiency of the provision made in each municipality within the district, as well as into the sufficiency of the support rendered by the municipality to the existing schools. The Board should then state its views and recommendations to the municipality; and if the municipality declined to accept its recommendations, it would be open to the Board to make a representation on the subject to the Commissioner, with a view to the consideration of the subject with the Municipal Budget. Municipalities will also be required to undertake the whole expenditure now borne by Government for the support of Government vernacular schools within municipal limits.

The Sub-Inspectors of schools would be servants of the Boards, and the same rules would govern their appointment, promotion, removal, and the like, as have been suggested for teachers. The Deputy Inspector, who must continue to be the chief educational officer of the district, would have relations both with the Inspector, whose subordinate he would be, and with the Boards. On the one hand, he must be the agent or deputy of the Inspector, enabling the latter to maintain his necessary connection with schools of every class throughout the district; on the other, he would be the chief adviser of the Boards in matters of education, though not subordinate to them. The Sub-Inspectors would not be formally subordinate to him; but his relations with the Inspector, to whom they would partly look for promotion, and to the Boards, whose servants they would be, would invest him with quite sufficient authority to enable him effectively to supervise their work. The correspondence of the District Board on educational matters should be carried on through the Inspector. In order to enable him to thoroughly supervise the educational work of his circle, it is necessary that he should possess complete information; and this could only be secured by making him the channel of communication with the Director, as he actually is under the present constitution of the District Committees. The Director similarly should correspond with the Board through the Inspector. The salary and travelling bills of Sub-Inspectors would be passed by the Local Board on the countersignature of the Deputy Inspector. The Deputy Inspector's bills would be passed by the Inspector.

The lower primary scholarship examination, which is held independently for each district, should be conducted by the Deputy and Sub-Inspectors jointly, and the award of scholarships should be made by the Local Board on the recommendation of the Deputy Inspector. The scholarship bills should be drawn by the head-master of the school in which they are held, and passed for payment by the Local Board. The examination for upper primary and for middle scholarships should be held by the Inspector for all the districts in his circle, the existing orders on the subject being maintained. These scholarships, of which each district has a special number assigned to it, should in general be awarded by the Inspector strictly on the results of the examination. It should, however, be open to the District Board to make a representation to the Inspector, before the award, in favour of particular schools or tracts which it may think deserving of special encouragement by reason of their less advanced state, and the Inspector should be authorized to consider such a recommendation in making his award. The stipends for these scholarships should be drawn under the existing rules.

At the close of the year the District Board should draw up an annual report of its operations, which should be sent through the Inspector to the Director.

A great part of these provisions would be embodied in rules framed under the Act, and would find no place in the law itself. The Lieutenant-Governor has, however, thought it well to enter into some detail in discussing the question of education, as there is perhaps no branch in which more interest will be taken by those to be entrusted with the management of local affairs.

18. Under the head *MISCELLANEOUS*, the only head of receipts and expenditure that could be made over with any advantage is "Staging Bungalows." Some officers have alluded to "Rewards for the destruction of wild animals." But this is purely a matter of routine. Government fixes the rates, and the Magistrate is the person who can most conveniently make the disbursements.

19. Under *MINOR DEPARTMENTS* the receipts are derived from emigration fees and receipts from Botanical Gardens and Cinchona Plantations. None of these could be made over. Of the expenditure heads "Public Exhibitions and Fairs" would appear to be a proper item for transfer. None of the grants, however, apply to districts likely to be brought under the Act. The same observation applies to "Grants to Public Gardens."

20. The Lieutenant-Governor considers that in most cases *TRUST* Funds other than those relating to religious endowments could with advantage be made over to District Boards. In some cases, however, the terms of the Trust would bar this, and only a general power should be taken.

21. The grants to be made over to local control would be based on the amount now expended by Government on the different services, reduced (except in the case of pound receipts above referred to) by the amount of receipts surrendered. Adjustments would also be made on account of contributions to educational funds to be made by municipalities. It would be necessary to provide that in cases where Government made a grant for such a work as a feeder road to a railway, it would add to the district grant a fixed percentage on the initial cost to provide for repairs. Finally, the Lieutenant-Governor trusts that Government would be able to make an annual grant of Rs. 5,000 to Rs. 10,000 to each district brought under the Act, to enable the Board to pay for an efficient Secretary and to bear the charges for travelling allowances and the like.

(3.)—*Relations of District Boards to Municipal Committees and Local Boards, and of Government to District Boards.*

22. Except in regard to Education and Provincial and District Roads, Municipal Committees should be entirely independent of the District Boards. Even if the details of Municipal Administration were such as could be efficiently supervised by a Board whose members would be drawn from all parts of a district, the fact that the municipality raises its own funds would be a sufficient bar to any



such proposal. At the same time the District Board will undoubtedly gain by the presence among its members of men of experience and business habits deputed to represent the municipalities.

23. The principle that should govern the distribution of powers between District and Local Boards is that all matters of purely local interest should be left as much as possible to the Local Boards, while all matters of district interest, in which would be included the preservation of uniformity of policy, should be decided by the District Board.

24. The Local Board would submit a general scheme of work with its application for funds for each year. This would be considered by the District Board in allotting funds, and its general scope would be adhered to during the year. Within the limits of this scheme, and subject to the rules governing the administration of each department, the Local Board would have power to settle all matters of purely local interest, to decide on the establishment of new pounds, the execution of small drainage works, the repair of local roads, and the like. The Lieutenant-Governor considers that it would be very useful to give Local Boards the power to delegate its powers or any of them in any department or departments to subordinate committees formed on the model of the Parochial

Committees under the English Public Health Act.

These Committees could be formed for any thannah, or outpost, or pergunnah, or cluster of villages, and they could administer the village-sanitation clauses of the Act, manage pounds, and superintend the construction and repair of village roads. The Committee might consist partly of members of the Local Board itself and partly of residents of the tract in question, selected by the Local Board. The Local Board would not thus be relieved of its own responsibility, and it would be able to alter the constitution of the subordinate Committee or to dissolve it at any time. Sir Ashley Eden believes that such a provision as this would be found extremely useful in developing local self-government, especially under such conditions as are described by the Commissioner of Burdwan.

25. The District Board would deal with repairs of all District, and of course of all Provincial, roads, with measures of drainage affecting more than one sub-division, with the grants to secondary schools, and so forth. It would allot funds to the different Local Boards for expenditure on local objects, and it would decide the general policy to be adopted—in such matters, for instance, as the method of distributing the grant for primary education. The District Board would again be bound to conform to the policy laid down by Government in regard to questions of general administration.

26. Should the Local Board fail to make proper provision for any necessary object, whether it be a road, a school, or a dispensary, the District Board would, on being informed by the report of any of its inspecting officers—its Secretary, District Engineer,

Powers of control.

or other—or otherwise, make enquiry, and if satisfied that the work was necessary, and that funds were available for it,

District Board over Local Board.

make an order limiting a time for the execution of the work by the Local Board. In the event of the work not being performed within the time fixed, the District Board would cause it to be executed and recover the cost from the Local Board. In the same way, the Commissioner of the Division, on the report of the Divisional Superintendent of

Commissioner over District Board.

Works, the Inspector of Schools, the District Officer, or otherwise, could call upon the District Board to do any work, or take certain order with any school or class of schools, or to provide medical aid, within a fixed period, and in default might cause the work to be done, or, in extreme cases, report to Government in view to a withdrawal of the power of the Board in regard to education, medical charity, or the like. This would be following the lines of section 299 of the English Act and placing the Commissioner of the Division provisionally in the position of the Local Government Board. Section 318 of the Municipal Act gives the Lieutenant-Governor similar powers on the report of a Committee appointed by the Commissioner with Government sanction. But it does not appear to be necessary that everything should be in the first instance reported to Government, though it would always be open to any Board aggrieved by the

action of the Commissioner to apply for relief to Government. Sir Ashley Eden does not apprehend that such applications would be numerous. The introduction of this measure will be attended by a great increase in work, and it is very desirable that we should not centralize too much, but should leave to the Commissioner of a Division a large discretion in the administration of the Act within his jurisdiction. This provision and the power of Government to withdraw any part of the Act or the whole of it from any district would be quite sufficient to protect the interests of the State.

27. The limit of cost within which District Boards should be permitted to undertake works without sanction must be settled by rule. The scale must be fixed with reference to the qualifications of the District Engineers. Commissioners should have the power of sanctioning works costing Rs. 50,000 or less. Though budgets should of course be prepared by the District Boards, the Lieutenant-Governor does not consider that it would be necessary to do more than require that copies should be supplied to the Commissioner. Each District Board should also furnish the Commissioner with a report of its operations every year,—the financial year being adopted,—and an account of its income and expenditure. This report and account should be published in the *Gazette*. Some officers are of opinion that the provisions of the Cess Act regarding interference with the budget are useless and vexatious. Sir Ashley Eden considers that, in districts which are fit to come under the new Act, all display of interference should, as much as possible, be avoided. He entirely concurs in the view of the Government of India that it would be hopeless to expect any real development of self-government if District Boards were subject to check and interference in matter of detail. Powers of substantial interference are reserved for cases of necessity, and nothing more is really required.

#### (4.)—*Establishment.*

28. In regard to establishments, Sir Ashley Eden would follow the policy enunciated above. Some officers recommend that Government should have the power of making rules to regulate the employment of officers and establishments, so as to guard against the unnecessary multiplication of appointments. Sir Ashley Eden does not agree in this view. With two provisos he would give the Boards free scope in regard to subordinate establishments. The first would be that the aggregate of salaries and absentee allowances of officers employed under the Public Works Department of the Board, including the proportion rateably charged against this head for the salary of the Secretary and for travelling allowances, should not exceed one-fourth of the income available for expenditure on public works during the year. The second would be that no new appointment on a salary of Rs. 200 per mensem, or more, should be created without the previous sanction of the Commissioner. As the power of Government itself to create a new appointment is limited to Rs. 250, the Boards need not complain if they are limited to Rs. 200. In regard to the higher appointments, moreover, of Secretary and Engineer, where special qualifications are required, it will be quite essential that Government should have a power of veto. The Local Government Board in England has control in the case of appointments of medical and other officers any portion of whose salary is paid out of moneys voted by Parliament. It is at least as desirable that Government should have control over the appointments of Secretary and Engineer to a District Board as that it should have the power of vetoing the appointments of similar officers under the Calcutta Corporation.

#### (5.)—*General Provisions.*

29. A schedule of rules to govern meetings and proceedings should be drawn up and appended to the Act as in the case of the English Act. These would require, amongst other things, timely circulation of a printed or written notice containing full information regarding the business to be transacted at the meeting. This is strongly insisted upon by more than one officer, and the

Lieutenant-Governor considers it a matter of the first importance. All members should have full and timely opportunity of considering and taking advice on all questions to be brought up for discussion. The rules would also provide for special and general meetings, the maximum interval between general meetings, the number of members required to form a quorum, the legal validity of minutes, and the like.

30. The formalities to be observed in making contracts should be specified. Those laid down in section 174 of the English Act of 1875 seem suitable for adoption with the necessary alterations. These include calling for estimates, giving public notice limiting tenders, furnishing full specifications, and, in the case of contracts of £50 or more, reducing to writing and sealing. The Chairman, or any member of the Board to whom he delegates the power in writing for any special occasion, should have power to contract on behalf of the Board. Contracts for sums exceeding estimates already framed should only be entered into with the sanction of the Board accorded at a meeting.

31. There is a general opinion that the expenses of members attending meetings of the Board should be defrayed. This is very necessary. Travelling allowance at the rate of four annas a mile by road and one and a half anna a mile by rail should be allowed to all nominated or elected members for journeys of more than five miles. *Ex-officio* members would draw their travelling allowance from Government under the existing rules. The bills of ordinary members would be cashed on the countersignature of the Vice-Chairman of the District or Local Board, as the case might be.

32. Finally, provision should be made for an audit sub-committee under each Board, and the strictest rules should be framed against incurring expenditure in anticipation of the sanction of the Board, except in cases of emergency to be generally described. The accounts would also be audited every year by the Examiner of Local Funds Accounts, and the result published in the *Gazette*, a copy of the report being exhibited in the office of the District, and of each Local Board.

33. Such is the general scheme of legislation which Sir Ashley Eden would propose. He would gladly have initiated it himself, because he believes that if it is worked judiciously, and without too great an anxiety to force elaborate provisions on districts which may not be ready for them, it will be successful. Some persons are of opinion that apathy and indifference on the part of the people will prove an insuperable obstacle to any attempt to interest them in local self-government. Sir Ashley Eden does not share these apprehensions. In many districts in Bengal there are able and energetic men who are willing to take a share in the management of public affairs. Their readiness to assist only requires judicious management and direction. If these men are properly encouraged and are treated with reasonable confidence, their interest in the work will increase, and their example will be followed by others. Sir Ashley Eden trusts that this will be the policy of the officers of Government in administering this Act, and that, though there may be some disappointments at first, the ultimate result will be a large measure of relief to the public departments and of lasting benefit to the best interests of the people.

### SCHEME FOR THE SUPPLY OF FILTERED WATER TO THE SUBURBS OF CALCUTTA.

No. 292, dated Calcutta, the 17th April 1882.

From—COLMAN MACAULAY, Esq., Offg. Secretary to the Government of Bengal,  
Medical and Municipal Department,

To—The Commissioner of the Presidency Division.

SINCE the receipt of Mr. Harrison's memorandum, dated the 31st October 1881, a copy of which was forwarded to you with endorsement No. 966, dated the 3rd December last, the Lieutenant-Governor has had before him, demi-officially, the question of supplying the Suburbs with filtered water from the Calcutta water-works. To assist the Municipal Commissioners of the Suburbs in arriving at an approximately correct estimate of the cost of the scheme proposed by the Chairman of the Calcutta Municipality in his note referred to above, Sir Ashley Eden placed the services of Mr. R. B. Buckley, an Engineer of great experience in the Irrigation Department, at the disposal of the Commissioners.

2. From the papers now submitted it appears that the Suburban Commissioners have agreed to contract with the Corporation of the Town of Calcutta for an average minimum supply of 2,000,000 gallons of water per diem, to be increased, if required, to 4,000,000 gallons. They have also expressed their willingness to pay an amount proportioned to the cost to the Town Corporation of the water delivered in the Suburbs, but at a rate not exceeding two annas per 1,000 gallons. They also stipulate that all mains for the supply of water to the Suburbs, laid beyond suburban limits, shall be laid by and at the cost of the Town. The only points which now remain to be settled are (1) the method of distribution, (2) the cost of distribution, and (3) the manner in which the funds for providing and distributing the water shall be raised.

3. Under the scheme\* prepared by Mr. Buckley it is proposed that the northern parts of the Suburbs, lying beyond the Baliaghatta Road, should be supplied with water directly from the town mains, and that to supply the southern parts of the municipality, three raised reservoirs should be constructed, each capable of holding half a day's supply. The quantity to be supplied from the town mains is estimated at 452,000 gallons per diem and that from the reservoirs at 1,548,000 gallons. The population to be thus supplied is reported to number 182,000 persons. The scheme also provides for a total consumption of 10 to 11 gallons per head, but the maximum draught is not to exceed two gallons per head in any one hour. With this draught it is expected that a head of 8 to 10 feet will be available at every stand-post. The scheme also provides for house-connections to a limited extent, with a maximum supply not exceeding one-fourth of the whole supply of two million gallons. The names of the streets to be laid with water-pipes are given in the annexed list.

4. The estimates prepared by Mr. Buckley include only such works as are to be actually constructed within the suburban area. The prime cost

	Rs.
Price of water at two annas per 1,000 gallons	91,000
Interest on capital at 4½ per cent.	29,478
Working expenses	7,600
Sinking fund at 1 per cent.	6,989
Insurance at ½ per cent.	3,408
Total	1,38,382

of the works is estimated roundly at Rs. 6,93,000, and the total annual cost including working charges at Rs. 1,38,382 as noted in the margin. It is stated that to meet this annual cost it will be necessary to impose a tax on the Suburbs at the rate of 5 per cent. on the annual value of the holdings situated in the streets to be laid with pipes. The Lieutenant-Governor is doubtful of the necessity of paying for insurance on such works as these. Even a severe cyclone would probably not destroy the reservoirs, and he sees no other risk to which they are exposed. If therefore this item is struck out, the annual charge will be reduced to Rs. 1,35,000 in round figures.



5. A second scheme,\* prepared by one of the Suburban Commissioners, Pundit Pran Nath Saraswati, has also been submitted. The main object of this scheme is to diminish the cost of the works so that no rate, or at most a very light rate, would have to be levied. It is proposed to effect this by limiting the gratuitous supply to what is necessary for drinking and cooking purposes,† and charging the rich and well-to-do persons, whose houses are supplied with pipes in connection with the mains, a fair and reasonable price for water consumed. The consumption would be determined by a meter, the cost of which, together with the entire cost of the house-connections, would be borne by the house-owners who would also bind themselves by guarantee for a short term of years to consume certain minimum quantities of water. The scheme also calculates on the Suburban Commissioners being allowed a monopoly of the sale of filtered water in the Suburbs for business purposes and for the use of the shipping in the port within suburban limits. At present the monopoly is held by the Calcutta Municipality, and it is extremely doubtful if they would relinquish it in favour of the Suburban Commissioners. For the gratuitous supply, it is proposed under this scheme that there should be 25 central points of distribution, viz. 10 groups of hydrants to be supplied from the Tallah pumping-station during the ordinary hours, and 15 reservoirs to be filled at night. It is also proposed that the houses to be supplied from the reservoirs should have iron or masonry tanks fitted in them to hold a day's supply, these tanks being filled during the night.

\* Co y annexed.

† This is put down at two gallons per head per diem—a quantity which is quite insufficient.

6. Both these schemes have been subjected to independent professional scrutiny, and preference has been given to Mr. Buckley's scheme, which is liberal, safe, and at the same time economical. The objections to the other scheme are that the supply of water, which it is proposed to give, would be insufficient, while the supply to private houses would be intermittent. On sanitary grounds the latter is a serious objection, as water stored in tanks and cisterns is very liable to contamination from various sources, even if the receptacles are more carefully looked after and more constantly cleaned than can be expected in the poorer houses in which they would be fitted. Financially, also, it is doubtful whether the latter scheme would prove successful, as it would throw a great part of the burden of the cost on a very small section of the population.

7. The Lieutenant-Governor considers that the scheme prepared by Mr. Buckley is in every way superior to that of Pundit Pran Nath Saraswati, and, in view of the great importance of supplying the Suburbs of Calcutta with a sufficiency of pure water, he is prepared to give a grant of Rs. 1,70,000 in aid of the measure on condition that the work is begun by 1st January 1883. As the interest on capital forms only a small part of the annual cost, a contribution spread over a term of years will be more suitable than a single grant. Government will therefore give Rs. 50,000 for the first year, 1882-83, and Rs. 30,000 a year for the four succeeding years. This will enable the Commissioners to work the scheme for the first year with a  $3\frac{1}{2}$  per cent. rate.

8. I am now to request that you will be good enough to instruct the Chairman of the Suburban Municipality to lay this offer of the Lieutenant-Governor before the Commissioners, and to suggest to them that in the event of their consenting to take the water from the Calcutta Municipality at prime cost, the adjustment of the cost should be determined by an arbitrator appointed by each municipality with an umpire appointed by Government. The Lieutenant-Governor hopes that with the material reduction of the rate the Commissioners will agree to adopt the water-supply scheme prepared by Mr. Buckley, as it is absolutely essential for the health of the over-populated Suburbs that the inhabitants should be able to procure better water than is at present available.

*Note on the probable Capital Cost of the Works necessary for a supply of two million gallons of Water in the Suburbs of Calcutta.*

1. At the meeting of the Water Supply Committee of the Commissioners for the Suburbs of Calcutta, held on the 22nd November, I was requested to give a brief outline of the works necessary for the Suburban water supply and their approximate cost.

2. The conditions of supply which the Committee laid down were these:—

Conditions of supply.

1st.—The maximum quantity of water to be at present provided for is 2,000,000 gallons daily.

2nd.—The population to be supplied is about 1,64,000, resident in certain defined localities. It is to be assumed that a fringe outside these localities, estimated to contain about 10 or 11 per cent. of the above number, will draw water from the mains. So that the total number of people to be supplied is about 1,82,000.

3rd.—That the maximum draught on the mains is to be assumed to be 2 gallons per head per hour.

4th.—That with this draught a head of not less than 8 to 10 feet should be available at any stand-post.

5th.—That house-connections are not to be permitted as a rule, and that the total quantity of water, which is to be supposed to be drawn by house-connections, will certainly not exceed one quarter of the whole supply of two million gallons.

6th.—That the estimated cost of the works is to include only those works which will be actually located in the Suburban area. The cost of any works in the Town, which might be necessary to the supply to the Suburbs, is to be borne by the Town Commissioners.

3. I pointed out to the Committee that in my opinion these conditions would not

Probable insufficiency of these conditions in a few years.

satisfy the requirements of the Suburbs for more than a few years, and that in spite of themselves the Municipal Commissioners of the Suburbs would soon find themselves

compelled to give more house-connections than they now intend to do, and that the provision of a maximum draught of two gallons per head per hour would not eventually satisfy the rate-payers. I still hold this opinion most firmly. I consider that it would be a wiser policy to lay down mains which would provide for a draught of four gallons per head per hour; but as it is evident that it is the desire of the Suburban Commissioners to bring the cost of the works to as low a figure as possible, and as I have no hesitation in saying that the conditions, enunciated in paragraph 2, will certainly be of great advantage to the Suburbs, and probably fully satisfy the requirements of the people for some years to come, I will admit that the Commissioners may be right in laying down conditions in which I cannot fully concur.

4. Since the meeting of the Committee I have gone more carefully over the calculations of the probable cost of the Suburban works. I am glad to say that I think that the conditions assumed may be fulfilled for a somewhat smaller sum than I then thought would be necessary.

5. The proposal which has been made by the Town Commissioners to those of the

Proposal of Town Commissioners.

Suburbs, expressed in Mr. Harrison's note of the 31st October, is that the Suburbs should construct, and pay for, all works lying actually in the Suburbs, and that the Town should deliver a certain quantity of water, not less than 2,000,000 gallons daily, at a definite price to be fixed hereafter, but which would be about 2 annas per thousand gallons. Paragraph 9 of Mr. Harrison's note proposes that the supply should be given in one of three ways:—

(a) Into raised reservoirs in the Suburbs.

(b) Into reservoirs attached to one or more pumping stations in the Suburbs.

(c) Through metres into pipes leading directly to the Suburbs.

I am strongly opposed to the last of these proposals as far as the southern and south-eastern Suburbs are concerned. I am quite certain that, unless the Town provide very much greater pumping power than they propose, that the result would be most unsatisfactory to the Suburbs. Concerning the two former proposals (a & b) I admit there is much room for argument. I know that it is the opinion of some, who are most competent to judge, that the second of these (b) is the better. It may be so, but I prefer the former for these reasons:—

1st.—Because there can be no doubt that there is ample engine power in the Town to supply during the night and during the slack hours of the day, the present requirements of the Suburbs.

2nd.—Because pumping stations in the Suburbs would entail responsibilities of which the Suburban Commissioners might prefer to be free.

3rd.—It is certainly open to dispute whether pumping stations might not prove more expensive than raised reservoirs.

6. The scheme which I recommend is the first (a) of those proposed by the Chairman of the Town Commissioners, namely, that of raised reservoirs in the southern Suburbs. With the kind assistance

Southern Suburbs to be supplied by raised reservoirs.

of Mr. Sterndale, I have been able to divide the Suburban population approximately into suitable groups. These are shewn in the accompanying tracing. With his assistance, with that also of the Engineer to the Suburban Commissioners, I have selected the site shewn on the tracing which I think most suitable for the raised reservoirs. Those portions of the

Northern and north-eastern Suburbs to Suburbs which lie north of the Baliaghutta road can be easily supplied by the Tallah Pumping Station directly from

the Town mains without any inconvenience to the Town. I should propose then to supply this area in that way. It is the area lying south of that road which I propose to supply from raised reservoirs. The following table shows the proposed divisions :—

Supply to be given from	Districts.	Population according to last Census.	Total of each group.	Population to be supplied including a fringe outside the area actually piped.	Quantity of water to be supplied daily.	Quantity of water to be supplied during hour of greatest draught.
					Gallons.	Gallons.
Watgunge reservoir	Garden Reach ... ..	19,032	66,693	48,690	534,000	97,180
	Watgunge ... ..	18,344				
	Alipore ... ..	23,438				
	Ekbalpore ... ..	16,869				
Rhowanipore reservoir	Rhowanipore ... ..	38,002	40,926	43,730	480,000	87,460
	Tollygunge ... ..	8,024				
	Part of Ballygunge... ..	.....				
Ballygunge reservoir	Ballygunge ... ..	14,400	60,323	48,610	534,000	97,220
	Banlapoorur ... ..	18,805				
	Batally ... ..	20,029				
	Total to be supplied by reservoirs ... ..	.....				
Town mains	A fringe along the Circular road in the last group ... ..	.....	.....	Say 1,820	20,000	3,640
Ditto ditto	Baliaghutta ... ..	30,260	49,125	16,510	182,000	33,020
	Matnicktollah ... ..	9,880				
	Ooltadansah ... ..	7,077				
Ditto ditto	Chittpore ... ..	17,524	26,204	22,740	250,000	45,480
	Cossipore ... ..	8,770				
	Total to be supplied directly from Town mains ... ..	.....				
GRAND TOTAL		.....	249,351	182,000	2,000,000	384,000

It will be readily seen from this statement, that of the total Suburban population, which it is proposed to supply, more than three-fourths will draw water from the raised reservoirs and the remainder will draw from the Town mains.

7. There would be some difficulty in determining with accuracy the quantity of water taken by those portions of the Suburbs which draw directly from Town mains, namely, the whole area north of the Baliaghutta road and a fringe of houses along the Lower

Circular road. It would, no doubt, be possible to fix meters and to actually measure the water delivered, but this would be both troublesome and expensive; the total quantity which will be taken by the Suburban area north of the Baliaghutta road is comparatively so small that, in my opinion, it is not worth while, either in the interests of the Suburbs or of the Town, to attempt any measurement of it. I would suggest that it should be assumed that the Suburban area drawing directly from the Town mains will consume 452,000 gallons daily as given in the above table, and that the house-connections in that area be restricted to a certain number, say to 300, with ferrules of one-third the size of those granted in the Town. If this were done, and if all the remainder of the supply, drawn in the area concerned, were taken from the stand-posts, I do not think the Town would have cause to regret the arrangement.

8. The three raised reservoirs in the southern Suburbs would be supplied from Wellington Square Pumping Station. It would certainly be better if they could be made of dimensions to contain a whole day's supply. But it would, at first, be ample if they contained half that quantity. I would propose therefore to make the reservoirs to hold altogether about 750,000 gallons. In order to give the full quantity of 1,548,000 gallons, which is the proportion of the 2,000,000 gallons, which will be consumed by the southern Suburbs, it would be necessary to fill the reservoirs twice a day. One of the three engines at Wellington Square would be quite capable of filling the reservoirs. At present all the three engines are idle from 6 p.m. to 6 a.m. and from 10 a.m. to 4 p.m., so that there is, in my opinion, no doubt it will be quite easy for the Town, as far as the Wellington Square engines are concerned, to give the required quantity of water partly at night and partly between 10 a.m. and 4 p.m.

9. A question will arise as to whether it will be necessary for the Town Commissioners to lay down, within the town area, independent mains to supply the raised reservoirs. It would be possible to utilise the present 18-inch main in Wellesley Street and the 12-inch main in Park Street for this purpose. If these mains were utilised certain arrangements would have to be made which might be troublesome. As the capital cost of these mains within the town area

would be borne by the Town, this question only indirectly concerns the Suburban Commissioners; the interest in the cost of the mains would of course be included, by the Town, in calculating the cost of the water supplied to the Suburbs. In any case the Town Commissioners must lay down about 5,000 feet of 18-inch main; if entirely independent supply mains are laid they would have to be about 10,000 feet of 18-inch main, at, say, Rs. 8 ...

2,500 feet of 12-inch main, at, say, Rs. 5 ... Rs. 80,000  
 ,, 12,500

Costing altogether about ... 92,500

So that the cost of entirely independent supply mains, which would certainly be more satisfactory to the Suburbs, would only entail an extra capital expenditure on the part of the Town of about Rs. 92,500. On the whole, then, if the Town Commissioners desire to have independent supply mains, I would recommend the Suburban Commissioners to raise no objection, although they are not, in my opinion, absolutely necessary, and they will increase the cost of the water to a small extent. With independent supply mains it would be more easy to gauge with accuracy the quantity of water actually taken.

10. I would propose to give the supply to the Suburbs between the hours of 6 to 10 in the morning and 8 to 6 in the evening. But there would be no difficulty in continuing the supply from 6 A. M. to 6 P. M. if required, that is if the people did not exhaust the maximum supply before. It would be possible to do this without independent supply mains, but easier and more satisfactory with them.

11. In order to fulfil the conditions of paragraph 2, and on the assumption that the Town do all the work necessary in the town area, I estimate that a sum of Rs. 6,93,617 must be expended in the Suburbs, as detailed below:—

*General Abstract of Estimate.*

	Rs.	Total Rs.
1. Land, say 3 beegahs, at Rs. 2,000...	6,000	
2. Raised reservoirs to hold 250,000 gallons each, at Rs. 55,000 each, as per detail in Appendix A...	1,65,000	
3. Turncocks, houses attached to reservoirs, 8, at Rs. 2,500 ...	7,500	1,72,500
4. Supply mains (in the Suburbs only) 11,282 cwt., at Rs. 5	56,410	
5. Distributing mains, as per detail in Appendices B and C—		
Low pressure mains, 31,271 cwt., at Rs. 5	1,56,355	
High pressure ditto, 6,995 cwt., at Rs. 5	34,975	
6. Collars, bends, branches, and reduces, 248 cwt., at Rs. 7	1,736	
7. Branches and connecting pipes for stand-posts, 1,239 cwt., at Rs. 5	6,195	
8. Allowance of 5 per cent. on foregoing for breakage, 2,550 cwt., at Rs. 5	12,750	2,68,421
9. Pipe-laying, as per Appendix B—		
Laying 2-inch pipes, 94,700 feet, at Rs. 20 per 100	18,940	
3-inch " 49,100 " at " 20 " "	9,820	
4-inch " 29,300 " at " 20 " "	5,860	
6-inch " 29,500 " at " 40 " "	11,800	
8-inch " 15,600 " at " 40 " "	6,240	
10-inch " 6,800 " at " 40 " "	2,720	
12-inch " 8,500 " at " 40 " "	3,400	
15-inch " 1,700 " at " 60 " "	1,020	
16-inch " 7,500 " at " 60 " "	4,500	
Total	242,700	64,300

10. Sluice valves, as per Appendix D—

3-inch, 9, at Rs. 40	360
4-inch, 11, at " 60	660
6-inch, 5, at " 90	450
8-inch, 2, at " 120	240
10-inch, 5, at " 150	750
12-inch, 8, at " 175	1,400
15-inch, 2, at " 250	500
16-inch, 3, at " 260	780
Fixing ditto	460
	5,600



11. Stand-posts, 800, at Rs. 100	...	...	30,000
Laying pipes to, and fixing, stand-posts 800 at Rs. 5	...	...	1,500
			<u>31,500</u>
	Total	...	5,48,321
Contingencies, at 10 per cent.	...	...	54,832
	Total direct cost of works in the Suburbs	...	<u>6,03,153</u>
Establishment, at 5 per cent.	...	...	30,155
Tools and plant, at 7½ per cent.	...	...	45,232
Interest on capital during the time the works are under construction (say 2½ per cent.)	...	...	15,077
	Total indirect charges	...	<u>90,464</u>
	Grand total cost of works in the Suburbs	...	<u>6,93,617</u>

In this estimate I have put the pipes down at the rate at which I think they could be obtained at present. The price of iron is constantly varying. The Commissioners must make allowance for this possible variation if delay occurs in carrying out the works. I have reduced the thickness of the pipes as much as possible, and have provided small pipes at the extremities of each system. The raised reservoirs I have provided for would be entirely of masonry and concrete. I prefer a combination of cast and wrought iron, as being lighter and more easily extensible. But I find that the cost of masonry is so much less that I do not feel justified in recommending the more expensive form which I prefer.

12. It will, I consider, be necessary to provide stand-posts with double self-closing cocks, placed about 800 feet apart on the pipes. From these two people will be able to draw water at the same time. If hydrants on the stand-posts are not considered necessary, some saving may be made.

13. The working charges for the Suburban water-supply would be approximately as follows:—

	Monthly.	Yearly.
	Rs.	Rs.
Allowance to Engineer to the Suburban Municipality	100	1,200
Superintendent of Water-Supply Works and Inspector of house-fittings	80	960
Three Turncocks in charge of reservoirs, at Rs. 20	60	720
Repairs and maintenance of reservoirs, pipes, stand-posts, &c.	300	3,600
Hire, working expenses, and maintenance of self-acting Telegraph from reservoirs, 7 miles, at Rs. 108	...	756
Office expenses, Analyses, Stamps, and Miscellaneous charges	...	264
Total	...	<u>7,500</u>

14. I am myself inclined to think that it will be found that the price assumed by the Chairman to the Calcutta Commissioners, of two annas per thousand gallons will more than cover the actual cost of the water. If, however, this figure be accepted, the calculation, which was laid before the Suburban Commissioners in Mr. Sterndale's note of 22nd of November, is as nearly correct as it can at present be made. The yearly cost to the Suburbs of 2,000,000 gallons daily may be thus estimated:—

	Rs.
Water, at 2 annas per 1,000 gallons	91,000
Interest on capital, at 4½ per cent.	29,478
Working expenses	7,500
Sinking Fund, at 1 per cent. on capital	6,936
Insurance, at ½ per cent. on capital	3,468
Total yearly cost	<u>1,38,382</u>

This would, I understand, necessitate a rate of 5 per cent. on the property within the area to be supplied.

B. B. BUCKLEY,  
Mem. Inst. C. E.

CALCUTTA, December 6th, 1881.

## APPENDIX A.

*Estimate of Ruised Reservoir to contain 250,000 gallons.*

ITEMS.	Quantity.	Rate.	Amount.
		Rs.	Rs.
Excavation of foundations ...	24,500 cubic feet ...	6	147
Concrete of foundations ...	8,200 " ...	35	2,870
Masonry in " ...	21,500 " ...	32	6,880
Brick masonry to plinth ...	18,000 " ...	35	6,300
" in superstructure ...	39,000 " ...	36	14,040
" in cement ...	17,000 " ...	42	7,140
Concrete in lime ...	9,000 " ...	35	3,150
Concrete in cement ...	12,000 " ...	45	5,400
Roofing ...	7,000 superficial feet	60	4,200
Pointing, fencing, &c., &c. ...	.....	...	873
Total ...	.....	...	51,000
Contingencies, say ...	.....	...	4,000
Grand Total ...	.....	...	55,000

## APPENDIX B.

*Abstract of quantities and sizes of Pipes in the Suburbs.*

DISTRICT	Popula- tion.	LENGTH OF PIPES IN FEET.								LENGTH OF DISTRIBUTING PIPE.		Total length of distributing pipes in feet.	SUPPLY MAINS IN SUBURBS.		Grand total length of pipes and mains in suburbs in feet.	REMARKS
		2-inch.	3-inch.	4-inch.	6-inch.	8-inch.	10-inch.	12-inch.	15-inch.	Low pres- sure.	High pres- sure.		12-inch.	16-inch.		
Area supplied by Wat- gunge reservoir ...	49,590	26,900	7,100	7,400	9,000	10,500	3,500	.....	1,700	65,000	.....	.....	.....	.....	.....	
Supply mains for Wat- gunge reservoir ...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	7,500	.....	
Area supplied by Bho- wanipore reservoir ...	43,730	14,100	11,100	5,200	7,400	800	700	1,800	.....	41,100	.....	.....	.....	.....	.....	
Supply mains for Bhowanipore reser- voir ...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,500	.....	
Area supplied by Ballygunge reservoir ...	48,610	26,400	11,700	9,600	10,400	4,300	2,600	3,000	.....	66,600	.....	.....	.....	.....	.....	
Supply mains for Ballygunge reservoir ...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	300	.....	• Mains of reservoirs.
Total low pressure ...	140,930	66,500	20,900	22,200	26,800	15,600	6,600	5,400	1,700	.....	.....	174,700	.....	.....	.....	
Area south-west of Canal, north of Bala- ghatta road ...	22,740	18,000	11,400	3,500	.....	.....	.....	.....	.....	.....	32,900	.....	.....	.....	.....	
Area north of Circular Canal ...	16,510	10,200	7,800	3,000	2,700	.....	200	.....	.....	.....	24,500	.....	.....	.....	.....	
Fringe along Lower Circular road ...	1,820	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	This area is directly lower on road pipes.
Total high pressure ...	41,070	28,200	19,200	7,100	2,700	.....	200	.....	.....	.....	.....	67,400	.....	.....	.....	
GRAND TOTAL ...	182,000	94,700	40,100	29,300	29,500	15,600	6,800	5,400	1,700	.....	.....	242,100	3,100	7,500	242,700	

## APPENDIX C.

*Abstract of Estimate of Pipes in the Suburbs.*

Diameter of pipes.		Length in feet.	Weight per foot run, in- cluding sockets.	Total weight.		Collars, bends, branches, and re- duce pieces.		Branches and con- necting pipes for stand- posts.		GRAND TOTAL.
				Pounds.	Cwt.	Pounds.	Cwt.	Cwt.	Cwt.	
2-inch	...	66,600	8.5	565,230	.....	.....	.....	.....	.....	.....
3-inch	...	20,900	10.75	224,425	.....	.....	.....	.....	.....	.....
4-inch	...	22,200	16.0	355,200	.....	.....	.....	.....	.....	.....
6-inch	...	26,800	27.5	737,000	.....	.....	.....	.....	.....	.....
8-inch	...	15,600	35.0	546,000	.....	.....	.....	.....	.....	.....
10-inch	...	6,600	50.0	330,000	.....	.....	.....	.....	.....	.....
12-inch	...	5,400	65.0	351,000	.....	.....	.....	.....	.....	.....
15-inch	...	1,700	125.0	212,500	.....	.....	.....	.....	.....	.....
Low pressure distributing pipes		174,700	.....	3,502,875	31,271	17,525	167	782	.....	.....
2-inch	...	28,200	10	282,000	.....	.....	.....	.....	.....	.....
3-inch	...	19,200	14	268,800	.....	.....	.....	.....	.....	.....
4-inch	...	7,100	19	134,900	.....	.....	.....	.....	.....	.....
6-inch	...	2,700	31	83,700	.....	.....	.....	.....	.....	.....
10-inch	...	200	70	14,000	.....	.....	.....	.....	.....	.....
High pressure distributing pipes		67,400	.....	783,400	6,985	.....	.....	.....	.....	.....
Supply mains		{ 12-inch 7,500	81 135	251,100 1,012,500	..... 11,282	.....	.....	.....	.....	.....
Total high pressure		68,000	.....	2,047,000	18,270	10,200	91	467	.....	.....
GRAND TOTAL		242,700	.....	5,549,875	49,546	27,725	248	1,249	51,035	.....

## APPENDIX D.

*Abstract of number and size of Sluice Valves.*

Area.	SIZE OF VALVES.								Total.
	3-inch.	4-inch.	6-inch.	8-inch.	10-inch.	12-inch.	15-inch.	16-inch.	
Area supplied by Wat-gunge reservoir ...	...	1	1	1	2	...	...	...	5
Area supplied by Bhowanipore reservoir ...	...	3	1	...	1	...	...	...	5
Area supplied by Ballygunge reservoir ...	3	2	1	1	1	...	...	...	8
South-west of Canal ...	6	4	...	...	...	...	...	...	10
North of Circular Canal ...	...	1	2	...	1	...	...	...	4
Supply mains of reservoirs ...	...	...	...	...	...	8	2	3	13
Total ...	9	11	5	2	5	8	2	3	45

*List of Streets proposed to be Piped.*

I.		Moonsheebazar road.
Gun Foundary road.		Gooreeparrah road.
Cossipore road.		Shibtollah lane.
Barrackporé Trunk road.		Convent road.
Beerparrah road.		Canal street.
Bharytollah road.		Middle road Entally.
Lockgate road.		Convent lane.
Sugar Works lane.		Palmer Bazar road.
Ramgopaul Ghose's lane.		Camardangah road (west).
Cally Prosonno Singhec's street.		Chattoo Baboo's lane.
Nowabputty street.		Shumboo Baboo's lane.
Chitpore Ghaut lane.		Puddopookur or south road Entally.
Frankissen Mookerjee's lane.		Rubbia gully.
Galiffe street.		Goaltolly road.
Chitpore street.		Moocheeparrah road.
Setpookur road.		Police Hospital road.
Cally Coomar Banerjee's lane.		Foolbagan road.
Ghosebagan lane.		Dehee Entally road.
Shambazar Bridge road.		Puddopookur lane.
Dhoneabagan lane.		Dehee Serampore road.
Ooltadangah road.		Hateebagan road (north).
II.		Tanteebagan road.
Gowreebere lane.		Hookawallah gully.
Bodri Das' Temple road.		Baniapookur road.
Halseebagan road.		Baniapookur lane.
Hasee Jakariah's lane.		Heteebagan road (south).
Moonsheeparah land.		Jannagore road.
Mannicktollah road.		Gorachand road.
Bahir Mirzapore road.		Tiljullah Butcherkhannah road.
Gurpar road.		Kurryah Bazar road.
Gas street.		IV.
Hursee street.		Jhowtollah road.
Khoyroo Moonshee's road.		Kurryah road.
Sealdah road (north).		Beckbagan lane.
Baliaghatta road.		Ghoogoodangah road.
Canal West road.		Peepulputty road.
III.		Rowland's lane.
Lime street.		Ballygunge Store road.
Sealdah road (south).		Ahireepookur road.
		Old Ballygunge road.
		Ballygunge Circular road.

## V.

Chuckerbere road (north).  
 Puddopookur road.  
 Russa road (south).  
 Russa road (north).  
 Lower Circular road.  
 Badiaparrarh road.  
 Bhowanipore road.  
 Peepulputty road.  
 Kansareeparrarh road.  
 Sankareeparrarh road.  
 Muddon Paul's lane.  
 Chowlputty road.  
 Strand road.  
 Boloram Bose's Ghaut road.  
 Sickdarparrah road.  
 Nepaul Bhuttacharjee's lane.  
 Kallighaut road.  
 Kallighaut Bridge road.  
 Gopaulnagore road.  
 Gopaulnagore lane.  
 Belvedere road.

Orphangunge road.  
 Alipore road.  
 Alipore lane.

## VI.

Diamond Harbour road.  
 Ekbalpore road.  
 Coomedanbagan lane.  
 Coomedanbagan road.  
 Circular Garden Reach road.  
 Bhookoylash road.  
 Ramcomul Mookerjee's street.  
 Watgunge street.  
 Moonsheegunge road.  
 Puddopookur street.  
 Koothree road.  
 Nolooparrarh road.  
 Shushteetollah road.  
 Pakoortollah road.  
 Meetapookur lane.  
 Garden Reach road.  
 Nemuckmehal Ghaut road.

*Memorandum on Suburban Water Supply.*

On the 2nd December 1881 I had the honour of submitting to the Chairman of the Suburban Municipality a scheme for a water supply to the Suburbs, in pursuance of a promise made to the Members of the Joint Committee (Water-Supply and Finance) charged by the Suburban Commissioners in meeting by their resolution of the 22nd November 1881, to elaborate a scheme for the supply of filtered water to the Suburbs. My Note of the 2nd instant has been submitted to Mr. Buckley, and I have now had the advantage of perusing his Note, dated the 7th instant, on my scheme as aforesaid, as also his "Note on the probable Capital Cost of the works necessary for a supply of two million gallons of water in the Suburbs of Calcutta," dated the 6th instant. As a matter of convenience, I have in this memorandum written out my entire scheme with such additions and alterations as have suggested themselves to me after a careful perusal of the valuable remarks contained in Mr. Buckley's Notes of the 6th and 7th instant.

2. In discussing the question of a water supply for the Suburbs, we must now take it for granted that the water must be derived from the same source as that supplying the Town. The questions which remain to be discussed are the following:—

- (a). What is the quantity of water which should be purchased by the Suburbs at a fair rate from the Town Corporation?
- (b). How should this water be distributed within the Suburban limits?
- (c). What would be the probable cost of the scheme?
- (d). How should this expenditure be met?

3. (a) As regards the first question, it is now admitted on all hands that we can never expect to have a supply on the Calcutta scale. Under the major project the Suburban supply of two million gallons to be distributed amongst a population of 1,84,000 or at a rate of 10·9 gallons per head. In Calcutta the present supply is, in round numbers, 7,250,000 gallons for a population of 4,00,000 or 18·12 gallons per head per diem, and after the water supply extension scheme for the Town has been carried out the supply would be increased to forty gallons per head per diem. Apart therefore from the question of pressure (wherein the comparison is immensely to suburban disadvantage) the major project necessitates the levy of a compulsory water rate of from 5 to 6 per cent. for a supply which would only be one-fourth of what the Town population would be enjoying per head. Under such circumstances it has struck me and some of my colleagues on the Suburban Board, whether we could not materially lower the cost of the public water supply by stinting it merely to drinking and cooking purposes, leaving the rich and the well-to-do to pay for the consumption of the water for domestic use in general. If by such means the cost would approach even loosely the sums which we have before this budgetted for water supply purposes, we would be quite justified in making the necessary grant for water supply from our general revenues. Even if such a grant were not feasible for any valid reasons, at the worst only a very light water rate would have to be imposed.

4. The entire population of the Suburbs is shewn by the last Census to number 2,51,439, of whom more than 20 per cent. are children up to the age of twelve years. The population does not certainly increase as a whole, and as the decrease in population has of late been simultaneous both in Town and Suburbs, there is no apprehension of the population of the latter being sensibly increased by the influx of emigrants from the Town.



5. This population, which for the reasons above stated may be treated for purposes of our present calculations to be equivalent to a population of two hundred twenty five thousand (225,000) adult persons, is, on the whole, as compared with the Town, much better circumstanced in the matter of a water supply for secondary domestic purposes. The *Hooghly* and the *Tolly's Nullah*, as also numerous tanks and wells sufficiently and safely meet the wants of the general population of the Suburbs for all purposes except cooking and drinking. The municipal scheme should therefore provide a gratuitous supply to the entire population for the primary domestic purposes of cooking and drinking, and at the same time offer reasonable facilities and encouragement to such of the suburban rate-payers as being advantageously located in that respect might be inclined to purchase water for all manner of domestic consumption:

6. The amount of water required for cooking and drinking purposes in tropical countries is fixed by Parkes on the basis of actual experience and existing regulations at 1 gallon per diem for each adult person. The consuming population being reckoned at 2,25,000, a daily supply of 450,000 gallons, 50,000 gallons for unavoidable waste, or in other words of 500,000 gallons would be amply sufficient to meet the legitimate demands of the entire suburban population for *drinking* and *cooking* purposes.

7. It is evident, however, that a small supply like that of half a million gallons will not be financially successful in as much as the rate charged for the water by the Town Corporation varies inversely as the quantity. Now I take it that it must be an essential condition in any arrangement between the two Municipalities that the Suburbs should have the monopoly of all sales of filtered water within their own limits. In 1880 the Calcutta Corporation sold the following quantities in the Suburbs for business purposes\*:-

			Gallons.
Bengal Ice Manufacturing Co.	...	...	2,910,592
Oriental Gas Company	...	...	211,068
Watson's Patent Press Company	...	...	190,506
Total			3,312,166

Which is equivalent to a daily supply of 9,000 gallons per diem. During the same year we learn that 6,331,351 gallons of filtered water were sold by the Town Commissioners to the Shipping, which is equivalent to a daily consumption of 17,345 gallons. Bearing in mind the number and nature of Dockyards which line the suburban banks of the *Hooghly*, I think that it would be very safe to assume that 1,500 gallons daily would be required for the use of the Shipping which comes to port within suburban limits. Thus we can reckon upon a *paying* consumption of 10,500 gallons from business firms and the Shipping.

8. It is evident, however, that the above increase is very small indeed, and would have no effect in lowering the rate for the price of the water. To augment our supply I suggest that the Suburban Municipality should invite offers for house-connections wherever their own or the Calcutta pipes are available. I have already stated that the Suburban Municipality should have the monopoly of the entire local consumption. In this way all the premises situated on either side of the Barrackpore Trunk road or on the suburban side of the Upper and Lower Circular roads would be allowed to be connected with the Calcutta mains. As a matter of fact there have been applications for permission to connect such suburban houses, but hitherto the offers have been generally declined by the Town Commissioners on principle. Besides the abovementioned roads, we must also include in our estimate of house-connections portions or whole lengths of many other important roads in the Suburbs (the details whereof are given hereafter) which would have to be piped under this scheme for the purpose of connecting the central points of distribution with the Calcutta Water Works. For my own part, looking to the length of the roads, the nature of the localities, the high prices at present paid by non-residents for the filtered water and for the carriage thereof, the comparatively speaking low price at which the water could be delivered into each house, and further looking to the number of large establishments, public and private situated thereabout, I am sanguine that connected houses in the Suburbs will consume a quantity of filtered water which, together with the 10,500 gallons mentioned in the preceding paragraph, will come up to one million gallons per diem. To make assurance doubly sure, I would notify that house-connections in the Suburbs should be allowed in priority of application. The applicants should undertake to bear the entire cost of house-connections (inclusive of a meter) and at the same time undertake for a short term of years to consume certain minimum quantities of water, at a fair price, which should be payable to the Suburban Corporation. Having thus calculated the exact minimum quantity required for private consumption, the Suburban Municipality should contract with the Calcutta Corporation for the total of the public and private supplies. I would stipulate therefore for a present daily supply of 1,500,000 gallons increaseable at the option of the Suburbs to three millions.

9. (b) As regards the mode of distribution, I propose that the public supply of half a million gallons should be given at 25 central points of distribution. The old system of suburban water supply was to excavate or conserve a good tank in every populous locality. Let clusters of stand pipes or masonry reservoirs charged with filtered water be placed wherever in former times a tank would have been conserved or excavated. Let the people resort

to these central points of distribution as they are now resorting to tanks. They are accustomed to fetch water from pretty long distances. The poor carry it for themselves, the middle class purchase it from water carriers (*bharees* or *bhistees*) and the rich have their own servants for the purpose. Looking to the high estimation in which filtered water from the Calcutta Water Works is held by the rich and middle classes of the suburban population to the great rush on the Town hydrants when the use thereof was gratuitous, and finally to the respectable quantity of 5 million gallons which suburban residents purchased in 1880, at high prices ranging from Rs. 1-9-7 to Rs. 1-per thousand gallons at a great disadvantage of carriage, I maintain that it is reasonably certain that the better class of suburban inhabitants will all consume filtered water either from the central points of gratuitous distribution or by means of house-connections, in which latter case the additional facilities of consumption and the disappearance of carriage charges are sufficient equivalents for the initial cost of house-connections and the current expense for the price of water at a fair and reasonable rate. Indeed in houses let for hire the proprietors will generally make the water-connections at their own cost, recouping themselves by a slight addition to the rental; and the tenant would only pay for the water consumed or undertaken to be consumed on the premises.

10. It might be doubted whether the 25 distribution points will sufficiently and safely provide for the necessities of the poor, it being a possible apprehension that from ignorance and laziness they will resort to the nearest source of water (irrespective of its purity) rather than go to a greater distance to fetch filtered water from the points of distribution provided by the Suburban Municipality. Now in the first place the servants and dependants in all premises where house-connections will be allowed, as also in most of the better class houses where filtered water will be carried on purchased for consumption, may be expected to be supplied with filtered water for drinking and cooking purposes. In the 2nd place we must remember that round about each distribution point there must be many poor people who will find it to be the nearest source of supply, and will therefore necessarily resort to it. Excluding these two classes of the poor, as regards the residuum, it must further be remembered that even the ignorant poor are seen to exercise within certain limits an amount of discretion in the choice of potable water. Water which to the eye and to the taste is palpably impregnated with impurities, the poor will not only shun, but they are seen every day to travel to a longer distance to secure potable water of greater apparent purity. Therefore we may also reasonably expect a third class of poor persons to consume filtered water from the central points of gratuitous distribution, although the latter might be a little more distant from their houses than less purer sources of supply.

11. Should it be found in practice that the distance of the central points acts as a preventive to the free use of the filtered water by any large number of the population in particular localities, it would be quite feasible to organise or to subsidise a system of water carts, with due regard to Hindu and Mahomedan prejudices, whereby filtered water would be hawked for sale from door to door in those less favoured localities. As a matter of fact carting is the most economical way of carriage when large quantities of water are concerned, and I feel sure that even if to the cost price of the water were added a sum sufficient in the long run to cover the outlay for construction and maintenance of these carts, the water could be sold at least as cheap (if not cheaper) than water ordinarily sold by *bharees* and *bhistees*.

12. Appendix A annexed hereto gives details about the location of the central points of distribution and the quantities to be dispensed at each of them. Subject to trifling modification or redistribution, they are put forth here to give a definite idea of the scheme. It being pronounced by competent authority that the northern and eastern portions of the Suburbs can be easily supplied during the ordinary hours by the Tallah pumps through the Calcutta mains, I would place at distribution points No. 1 to 10 clusters of hydrants sufficient in number and discharging capacity to allow the population to draw the quantities of water shewn in Appendix A, two-thirds of the supply being drawn at the hours of 6 to 10 in the morning and the remainder from 3 to 6 in the afternoon. The supply for the southern and south-eastern portions of the Suburbs should be given through reservoirs slightly raised above ground to allow people conveniently to draw water therefrom whilst standing, as they now do from the Town hydrants. They are to be constructed of masonry and concrete as recommended by Mr. Buckley in his Note on the major project. They should be of the total capacity of 322,400 gallons and all filled in the night time. As regards the private supply by house-connections, so far as the northern and eastern Suburbs are concerned I would taking advantage of the pressure from the Tallah Pumping Station, allow consumers so situated to draw water at their own convenience through meters. As regards the southern and south-eastern portion of the Suburbs (namely the portion south of Baliaghatta road) in view of the great difficulty of providing water thereto direct from the mains at morning when water is most required both in Town and Suburbs, I would require house-holders in addition to other fittings to put up iron or masonry tanks of sufficient size to hold a day's supply, and all these would be filled at night from Wellington Square Pumping Station. The pipes should be of such size and weight as to be able to carry at present a million and a half gallons per diem and double that quantity in the future, under the conditions above stated.

13. To sum up, therefore, the main features of this scheme are as follows:—

- i.—That there should be a public supply of half a million gallons of filtered water distributed gratuitously within the Suburbs from 25 central points of distribution.

- ii.—That for the northern and eastern Suburbs the public supply should be distributed by means of 10 clusters of hydrants, and that for the southern and south-eastern Suburbs it should be done by 15 reservoirs (of 322,400 gallons total capacity) built of masonry and concrete, slightly raised above ground and filled during night.
  - iii.—That the Suburban Municipality should have the monopoly of all consumption of filtered water within the Suburbs, whether for domestic or for the business purposes.
  - iv.—That house-connections with meters should be allowed at the cost of the proprietors in suburban premises along the Barrackpore Trunk road and the Upper and Lower Circular roads, and also along the pipes which will lead from the Calcutta mains to the 25 central points of distribution; a fair price being paid to the Suburban Municipality for water so consumed.
  - v.—That in the northern and eastern portion of the Suburbs connected houses should get a supply during the Town hours, whilst in the southern and south-eastern portion of the Suburbs the day's supply would be stored at night in tanks constructed or placed within the connected premises.
  - vi.—That offers should be invited from house-holders to guarantee house-connections and the consumption, of minimum quantities, it being at present guessed that offers would be received for the consumption of one million gallons daily.
  - vii.—That a contract be entered into with the Town Commissioners for the total of the public and private consumption (a minimum of  $1\frac{1}{2}$  and a maximum of 3 million gallons daily), the whole price of the water being paid in the first place by the Suburban Municipality, but a great portion of the same being afterwards recovered back on account of water consumed with house-connections.
  - viii.—That the clusters of hydrants be put up, the reservoirs constructed, and that pipes leading thereto laid down by the Suburban Municipality at their own cost. The pipes being of sufficient weight and dimension to carry the supply of  $1\frac{1}{2}$  to 3 million gallons under the conditions already indicated.
14. The questions upon which I ask Engineering opinion to be taken are the following:—
- i.—What would approximately be a fair charge per thousand gallons for the Town Commissioners to levy from the Suburbs for a daily supply of  $1\frac{1}{2}$  million gallons, as also for one of three million gallons of filtered water delivered into connected houses and central points of distribution under the conditions involved in this scheme?
  - ii.—What would be the cost of pipes and pipe laying in the Suburbs?
  - iii.—What would be the cost of the 10 hydrant groups and 15 masonry reservoirs?
  - iv.—What would be the current maintenance and establishment charges of the water supply under this scheme?
  - v.—What would be a fair price for the Suburban Municipality to demand from house-holders and also from business firms? Looking to the present practice of the Calcutta Corporation, would not the Suburban Municipality be justified in charging much more than the cost price for water taken by the Shipping and by business firms?
  - vi.—Generally such remarks upon the scheme as may be considered necessary.
15. It is premature, before these questions are answered, to discuss the cost of the scheme and the means of raising the expenditure. I therefore postpone the consideration of these two matters till the receipt of a reply to the questions set out in the preceding paragraph.

PRAN NATH PUNDIT,

*Member.*

The 17th December 1881.

## APPENDIX A.

No.	Location.	Wards supplied.	No. of Gallons.
1	Junction of Ooterparrah road ...	Cossipore ...	8,800
2	Ditto of Gun Foundry road with Cossipore road ...	Cossipore, Chitpore ...	17,600
3	Ditto of Bhareetola road with Lock Gate road ...	Chitpore ...	8,800
4	On Barrackpore Trunk road at northern foot up Barrackpore bridge.	Chitpore ...	8,800
5	On Belgachia road at the western foot of Dum-Dum bridge ...	Chitpore, Ooltadangah.	16,800
6	On Ooltadangah road, at western foot of Ooltadangah bridge	Ooltadangah, Manicktolla.	17,900
7	Manicktolla road, at western foot of Manicktolla bridge ...	Manicktolla, Baliaghata.	25,500
8	On Gas street, at the western foot of Narcoaldanga bridge ...	Baliaghata ...	15,200
9	Junction of Narcoaldanga road with Eastern Bengal Railway	Baliaghata ...	15,200
10	Ditto of Baliaghata road with Eastern Bengal Railway ...	Baliaghata, Entally	43,000
11	Ditto of North Entally road with Canal street ...	Entally ...	27,500
12	Ditto of Baniapookur Police Station road with Baniapookur road.	Baniapookur ...	18,900
13	Junction of Kurryah Bazar road with Tiljullah road ...	Baniapookur, Ballygunge.	26,900
14	Ditto of Ballygunge Store road with Body Guard road ...	Ballygunge ...	7,300
15	Ditto of Ballygunge Circular road with Puddopookur road	Ballygunge ...	7,300
16	Ditto of Peepulputtee road with Rowland's lane ...	Ballygunge, Bhowanipore.	26,600
17	Ditto of Russa road (north) with Puddopookur and Kanareeparrah road.	Bhowanipore ...	19,300
18	Junction of Russa road with the Kallighaut road...	Tollygunge, Bhowanipore.	28,400
19	Ditto of Peenulputtee road with Bhowanipore road ...	Bhowanipore ...	19,600
20	Ditto of Alipore Jail road with Belvedere road (near Municipal office).	Alipore, Tollygunge	14,000
21	Junction of Kidderpore and Budge-Budge roads ...	Alipore, Ekbalpore	25,000
22	Ditto of Circular Garden Reach and Watgunge roads ...	Alipore, Watgunge.	21,500
23	On Garden Reach Circular road, near Garden Reach Police station.	Garden Reach, Ekbalpore, Watgunge	43,000
24	Junction of Garden Reach and Chasedhobaparrah roads ..	Watgunge, Garden Reach.	25,200
25	Ditto of Garden Reach and Nemuckmehal roads ...	Garden Reach ...	12,700
Grand Total ...		.....	500,000



## FINANCIAL DEPARTMENT.

## FINANCE.

CALCUTTA, THE 18TH APRIL 1882.

## RESOLUTION.

THE orders of the Government of India have now been received on the Budget Estimates of this Government for the current year, and the Lieutenant-Governor has sufficient materials for framing a revised Regular Estimate of the receipts and expenditure of the year that has just expired. The Accountant-General's final report on the accounts for 1880-81 has not yet been submitted, but the preliminary issue is sufficient for practical purposes, and the general review of the financial position of the Province need not be postponed.

2. In the Resolution of 24th June last, Sir Ashley Eden examined the general results of the five years' contract of March 1877. He had only budget estimates to proceed upon in regard to the year 1881-82, but it was necessary that a general view should be presented of the effect of five years of extended decentralization upon the finances of Bengal. In that Resolution it was said:—"Before the next budget can be prepared, it will be necessary for the Government of India to decide, on the experience before it, what policy it will adopt for the future; whether the system of decentralization is to be contracted, to be maintained on its present footing, or to receive a further development, and how the shares of the Imperial and Local Governments respectively in the advantages of gain and the responsibilities of loss are to be determined and adjusted." In effect the interval that has since elapsed has seen an important advance in the policy which has proved so successful in Bengal. A new contract has been made for another period of five years, under which the interest of the Provincial Government has been extended to Land Revenue, Forests and Assessed Taxes, heads of revenue hitherto reserved as Imperial. While therefore it will not be necessary to repeat in all its details the examination made last year of the growth of the revenues under each head during the five years of the 1877 contract, a brief review of the Provincial finances will not be without some interest. An examination of the actuals of 1880-81 will show how the province stood at the beginning of 1881-82: a consideration of the regular estimates of 1881-82 will show approximately what were the results of the five years' contract of 1877 and what was the basis of the five years' contract of 1882; and a forecast of the revenue and expenditure of 1882-83 will show what will be the probable position of the province in the first year of the period upon which it has now entered.

## ACCOUNTS FOR 1880-81.

3. The Regular Estimate adopted in the Resolution of the 24th June 1881 assumed that the year 1880-81 had opened with a credit balance of Rs. 51,04,000, and closed with a credit balance of Rs. 49,01,000; that the total amount available for expenditure was Rs. 4,45,44,000, and that Rs. 3,96,48,000 had been spent. The actual result has been more favourable by Rs. 90,000. The amount actually available for expenditure was Rs. 4,47,83,000, and the amount actually expended was Rs. 3,97,92,000. The closing credit balance was thus Rs. 49,91,000. The following table gives a general view of the figures:—

			Regular estimate for 1880-81. Rs.	Actuals, 1880-81. Rs.
Opening balance	...	...	51,04,000	51,04,000
<b>Revenue—</b>				
Proper	...	...	3,53,86,000	3,56,40,000
Contribution	...	...	5,000	.....
Imperial allotment	...	...	40,99,000	40,99,000
		<b>Total</b>	3,94,40,000	3,96,79,000
		<b>GRAND TOTAL</b>	4,45,44,000	4,47,83,000

				Regular estimate for 1880-81.	Actuals, 1880-81.
				Rs.	Rs.
<i>Expenditure—</i>					
Civil	...	...	...	2,58,02,000	2,58,72,000
<i>Public works—</i>					
Interest	...	...	...	36,22,000	36,32,000
Railways	...	...	...	20,11,000	18,98,000
Irrigation and Navigation			...	25,70,000	24,34,000
Other Public Works	...		...	44,42,000	47,60,000
				1,26,45,000	1,27,24,000
Contribution to the Government of India				10,00,000	10,00,000
Contribution to local funds				1,96,000	1,96,000
				11,96,000	11,96,000
		Total	...	3,96,43,000	3,97,92,000
Closing balance	...		...	49,01,000	49,91,000
GRAND TOTAL				4,45,44,000	4,47,83,000

4. The principal heads under which the estimate of receipts was exceeded were *Other Public Works* (Rs. 1,74,000), *Law and Justice* (Rs. 58,000), *Irrigation and Navigation* (Rs. 36,000), *Marine* (Rs. 35,000), *Railways* (Rs. 23,000), and *Miscellaneous* (Rs. 18,000). In the single instance of *Education* (Rs. 23,000) did the estimated receipts fall short of the actual receipts by more than Rs. 10,000. The difference of Rs. 60,000 between the Imperial allotment as calculated in the resolution of the 24th June, and the amount shown in the accounts, is due to a refund of Rs. 54,000 to the Government of India in consequence of the re-adjustment of the marine grant for two years 1879-80 and 1880-81; to an addition of Rs. 5,000 on account of the Imperial contribution towards the cost of the registration of frontier traffic; to an addition of Rs. 33,000 on account of the sale proceeds of cinchona bark sold in London; and to a reduction of the credit under Inter-Provincial adjustments from Rs. 55,000 to Rs. 11,000. On the expenditure side the excess under *Other Public Works* (Rs. 3,17,000) was accompanied by savings under *Railways* (Rs. 1,13,000) and *Irrigation and Navigation* (Rs. 1,36,000). The estimates were also exceeded under *Stationery and Printing* (Rs. 73,000), *Refunds* (Rs. 38,000), *Land Revenue* (Rs. 30,000), and *Police* (Rs. 20,000), while under *Stamps* (Rs. 26,000), *Law and Justice*, (Rs. 25,000), *Medical* (Rs. 15,000), and *Marine* (Rs. 14,000), the expenditure fell short of the anticipated amount.

#### *Regular Estimate for 1881-82.*

5. In the Resolution of the 24th June 1881, it was estimated that the year 1881-82 had opened with a credit balance of Rs. 49,01,000; that the total amount available for expenditure would be Rs. 4,55,41,000; that expenditure on all accounts would amount to Rs. 4,40,95,000; and that the year would close with a credit balance of Rs. 14,46,000. It has been shown above that the year 1881-82 actually opened with a credit balance of Rs. 49,91,000. It will be explained further on how the Imperial allotment came to be increased from Rs. 38,10,000 to Rs. 38,84,000. Had the original estimate under this head been maintained the year would have closed with a credit balance of Rs. 26,75,000. The regular estimate of receipts is Rs. 3,73,03,000, and the amount available for expenditure would have been Rs. 4,61,06,000. The regular estimate of expenditure is Rs. 4,34,31,000.

6. The following statement shows the estimate for the year 1881-82 as adopted in the Resolution of the 24th June, and the regular estimate for that year :—

REVENUE.	Estimate, 1881-82.	Regular Estimate, 1881-82.	EXPENDITURE.	Estimate, 1881-82.	Regular Estimate, 1881-82.
	Rs.	Rs.		Rs.	Rs.
Opening balance	49,01,000	49,91,000	1. Interest	37,69,000	33,71,000
I.—Land Revenue			3. Refunds	6,46,000	7,50,000
III.—Forests			4. Land Revenue	27,00,000	27,00,000
IV.—Excise	90,00,000	95,00,000	5. Forests		
V.—Assessed taxes	3,50,000	3,50,000	6. Excise	2,70,000	2,70,000
VI.—Provincial rates	35,02,000	35,50,000	7. Assessed taxes	1,00,000	1,00,000
VII.—Customs	74,000	80,000	8. Provincial rates		
VIII.—Salt	1,35,000	1,60,000	9. Customs	7,00,000	6,95,000
IX.—Opium			10. Salt	22,000	22,000
X.—Stamps	1,18,00,000	1,20,00,000	11. Opium		
XI.—Registration	10,50,000	10,00,000	12. Stamps	4,34,000	4,34,000
XIII.—Post Office			13. Registration	6,32,000	6,09,000
XV.—Minor Departments	1,65,000	1,91,000	15. Post Office		
XVI.—Law and Justice	18,20,000	17,10,000	17. Administration	14,78,000	1,86,000
XVII.—Police	4,85,000	5,26,000	18. Minor Departments	2,80,000	3,00,000
XVIII.—Marine	12,00,000	11,00,000	19. Law and Justice	91,21,000	84,28,000
XIX.—Education	5,12,000	5,30,000	20. Police	41,00,000	41,32,000
XX.—Medical	1,05,000	1,38,000	21. Marine	12,17,000	10,07,000
XXI.—Stationery and printing	1,05,000	1,22,000	22. Education	26,90,000	26,77,000
XXII.—Interest	15,000	20,000	23. Ecclesiastical	9,000	8,000
XXIII.—Superannuation			24. Medical	11,25,000	10,93,000
XXIV.—Miscellaneous	6,55,000	6,55,000	25. Stationery and printing	8,64,000	9,37,000
XXV.—Railways	32,10,000	32,90,000	26. Political		
XXVI.—Irrigation and Navigation	18,75,000	17,02,000	27. Allowance		
XXVIII.—Other Public Works	6,72,000	6,00,000	28. Leave allowance		
Contribution	3,000	2,000	29. Superannuation	2,000	5,000
Total	3,08,30,000	3,73,05,000	30. Miscellaneous	3,02,000	3,15,000
Imperial allotment	38,10,000	83,84,000	31. Railways	26,40,000	32,16,000
GRAND TOTAL	4,55,41,000	5,06,89,000	32. Irrigation	40,00,000	37,61,000
			33. Other Public Works	67,93,000	66,92,000
			Contribution	1,95,000	3,33,000
			Total	4,40,95,000	4,31,31,000
			Closing balance	14,46,000	72,49,000
			GRAND TOTAL	4,55,41,000	5,06,89,000
			Provincial surplus (+) or deficit (—)	—34,55,000	+ 22,58,000

7. *Excise.*—The original estimate of this Government under Excise was Rs. 87,00,000. The Government of India, however, entered only Rs. 83,00,000 in the Imperial estimates. In June last, in consequence of the favourable nature of the settlements for the year, the Lieutenant-Governor raised the estimate to Rs. 90,00,000. Even this estimate, however, has been largely exceeded. When the regular estimate was framed the experience of the first ten months of the year appear to justify the anticipation that the gross receipts would not be less than Rs. 98,00,000. The receipts in February, however, for the first time during the year showed a falling off instead of an increase, and though in March a further rise is again shown on the receipts of the corresponding month in 1881, it is not probable that the gross revenue will be found to have exceeded Rs. 95,00,000. This estimate is exclusive of the share of the Bengal Government in the duty on Shahjehanpore rum. Under an arrangement with the Government of the North-Western Provinces a sum of about Rs. 55,000 on this account will be credited to this Government through the Imperial allotment.

8. *Assessed Taxes.*—The allotment of Rs. 3,50,000 made in 1880-81 for the administration of the license tax remained unaltered. The expenditure is shown partly under the same head and partly under the head of Refunds.

9. *Provincial Rates.*—The estimate of receipts from wards' and attached estates for 1881-82, as originally adopted, erroneously included a sum of Rs. 8,000 on account of percentage levied from estates in Maubhoom on account of treasury establishments. The rate on the Narail Estate has also been reduced. The estimate under this head will therefore be reduced from Rs. 62,000 to Rs. 50,000, and the gross receipts from provincial rates will stand at Rs. 35,50,000.

10. *Customs.*—The regular estimate exceeds the original by Rs. 6,000. The increase is chiefly under demurrage fees.

11. *Salt.*—The demand for warehouse accommodation has continued to increase, and the estimate has been raised to Rs. 1,60,000.

12. *Stamps.*—The original estimate of this Government under the head of Stamps was Rs. 1,20,00,000. This was reduced by the Government of India to Rs. 1,16,00,000, but, having regard to the indications of the early months of the year, the Lieutenant-Governor considered it safe to estimate that the receipt

would not be less than Rs. 1,18,00,000. The increase has been steadily maintained and there is reason to believe that the gross revenue from this source has amounted to Rs. 1,20,00,000. This sum will accordingly be entered.

13. *Registration*.—The estimate accepted in the Resolution of the 24th June for 1881-82, including revenue record-room receipts and land registration fees, was Rs. 10,50,000. There has been a great falling off in the number of registrations in consequence of the abundance of the harvest. The estimate has been reduced to Rs. 10,00,000.

14. *Minor Departments*.—The estimate of receipts under this head has been raised from Rs. 1,65,000 to Rs. 1,91,000. The increase is mainly under sale-proceeds of cinchona febrifuge, the demand for which is rapidly increasing.

15. *Law and Justice*.—The regular estimate of receipts under this head amounts to Rs. 17,10,000 against Rs. 18,20,000, the original estimate for 1881-82. The difference between the two estimates is as follows:—

	Original estimate. Rs.	Regular estimate. Rs.
Sale proceeds of unclaimed and escheated property ...	60,000	50,000
Court fees realized in cash ...	30,000	18,000
General fees, fines, and forfeitures ...	8,00,000	8,00,000
Jails ...	9,00,000	8,00,000
Pleaders' examination fees ...	18,000	35,000
Miscellaneous ...	12,000	7,000
Total ...	18,20,000	17,10,000

It has been found that the estimate of receipts from Jail manufactures was too high, and that not more than Rs. 8,00,000 will be realized from this source.

16. *Police*.—The original estimate of police receipts for 1881-82 was Rs. 4,75,000. As the receipts from pounds situated within municipalities had in all instances been made over to the municipalities concerned, the estimate was subsequently reduced to Rs. 4,65,000. There has been a large increase in the receipts from "cattle trespass fines," and "fees for the examination of steam-boilers." The regular estimate stands at Rs. 5,26,000.

17. *Marine*.—The estimate of marine receipts for 1881-82 has been reduced from Rs. 12,00,000 to 11,00,000. The decrease is due to—

- (1) The transfer of the port dues with the port approaches to the Port Commissioners, Calcutta;
- (2) The reduction of 15 per cent. in the pilotage fees; and
- (3) The transfer to the Port Commissioners of certain miscellaneous receipts included under other heads.

18. *Medical*.—The falling off in the regular estimate is partly due to the reduction in the rate charged for sick seamen against the Hospital Port Dues Fund, and partly to the reduced sale-proceeds of lunatic asylum manufactures. College and school fees also show a decrease. The rate charged for the maintenance of sick seamen was reduced in order to save the Hospital Port Dues Fund from insolvency. The rate levied is now less than half the actual cost, and the charge thrown upon the public revenues is consequently more than Rs. 60,000 a year. The regular estimate stands at Rs. 1,38,000.

19. *Stationery and Printing*.—The regular estimate provides for an increase of Rs. 17,000 over the first estimate. The increase is under miscellaneous press receipts.

20. *Interest*.—The Provincial receipts hitherto shown under this head chiefly represented the proceeds of the invested capital of the Education Department. The increase of Rs. 5,000 in the regular estimate is due to the inclusion of the interest on arrears of Public Works Cess realized under the provisions of section 45 of Act IX (B.C.) of 1880.

21. *Railways*.—The Government of India estimated the receipts under this head for 1881-82 at Rs. 31,10,000. Looking to the steady increase in the traffic on the three principal lines, the Lieutenant-Governor, in the Resolution of the 24th June, raised the estimate to Rs. 32,10,000. It is probable that even this sum will be exceeded. The regular estimate stands at Rs. 32,10,000.



22. *Irrigation and Navigation.*—The regular estimate under this head, compared with the first estimate, shows a decrease of Rs. 1,11,000. There is a falling off amounting to Rs. 1,14,000 under Orissa Canals, and to Rs. 28,000 under Midnapore Canals. Against these decreases there is an estimated increase of Rs. 16,000 from Calcutta and Eastern Canals, and of Rs. 15,000 from Sone Canals.

23. *Other Public Works.*—The greater part of the increase of Rs. 18,000 in the regular estimate is expected from "ferries."

24. *Imperial Allotment.*—The fixed allotment for 1881-82 was Rs. 36,25,000. In the estimate for the last year credit was taken for Rs. 2,00,000 on account of duty on Shahjehanpore rum collected in the North-Western Provinces for the five years 1877-82. A sum of Rs. 10,000 was also estimated on account of jail and printing charges against other Governments. On the other hand a provision of Rs. 25,000 was made for payment to the Assam Administration on account of duty on Shahjehanpore rum consumed in that province. The total allotment was thus estimated at Rs. 38,10,000. It has since been arranged with the Government of the North-Western Provinces that a credit of Rs. 55,000 only should be afforded to Bengal on account of the duty on Shahjehanpore rum imported to Bengal in 1881-82. Under the new contract all receipts from this source will be credited to excise under this Government. The inter-provincial adjustments with other Governments may bring in Rs. 10,000. The assignment for the charges on account of Government estates has been increased to Rs. 1,90,000, with effect from 1878-79. A credit of Rs. 80,000 will accordingly be taken in the accounts of 1881-82, viz. Rs. 10,000 each for that year and its two predecessors, and Rs. 50,000 for 1878-79. The Imperial contribution of Rs. 2,000 towards the cost of the registration of frontier traffic, and the sale-proceeds of the cinchona bark in London amounting to Rs. 88,000 should also be credited in the Provincial accounts through this head. A grant of Rs. 28,000 has been sanctioned by the Government of India on account of the payments made by this Government in 1879-80 and 1880-81 from provincial funds for the purchase of Port Canning debentures from private holders. The contribution of Rs. 20,00,000 made to the Imperial Government in the years 1879-80 and 1880-81 has been restored to this Government. A sum of Rs. 93,700 has been added by the Government of India on account of loss by exchange on stationery stores to be borne by Provincial funds. The total allotments thus amount to Rs. 59,81,700. From this amount a deduction of Rs. 4,21,000 should be made in consequence of the reduction in the rate of interest on capital expenditure from  $4\frac{1}{2}$  to 4 per cent. A further sum of Rs. 27,000 should also be deducted on account of the re-adjustment of the marine grant. The net allotment therefore stands at Rs. 55,33,700. Under the new financial settlement the Provincial Government will have to surrender to the Imperial Government a sum of Rs. 30,00,000 a year. In order, however, that the Provincial Government may not be suddenly embarrassed in consequence of the operation of this settlement, the Government of India have granted a sum of Rs. 28,50,000 to be credited to Bengal in the account of the year 1881-82. This amount should also be included in the Imperial allotment. The total allotment will then be Rs. 83,83,700.

#### EXPENDITURE.

25. *Interest.*—The regular estimate of interest charges for 1881-82 given by the Accountant-General, Public Works Department, was Rs. 37,90,000. This has been reduced to Rs. 33,71,000 in consequence of the decrease in the rate of interest from  $4\frac{1}{2}$  per cent. to 4 per cent.

26. *Refunds.*—The original estimate was Rs. 6,46,000. As large refunds of the license-tax and other revenues realized in 1880-81 had to be made in 1881-82, the expenditure will exceed this limit. The regular estimate is raised to Rs. 7,50,000.

27. Under the head of *Customs* the original estimate has been reduced by Rs. 5,000.

28. *Registration.*—As the estimate of receipts has been reduced there has been a proportionate reduction in the estimated charges for commission. The

regular estimate amounts to Rs. 6,09,000 against the original estimate of Rs. 6,32,000.

29. *Administration*.—The regular estimate shows an increase of Rs. 8,000 on the original estimate. There have been increases in the Civil Secretariat and in Commissioners' offices, against savings under "Staff and Household of the Lieutenant-Governor."

30. *Minor Departments*.—The expenditure on account of the Calcutta Industrial Arts Exhibition, for which no provision was made in the first estimate, accounts for the increase in the regular estimate. There were also extra grants under "Botanical Gardens," and "Donations to Scientific Societies," against savings under "Cinchona Plantations."

31. *Law and Justice*.—The regular estimate under Law and Justice stands at Rs. 84,28,000, showing a decrease, chiefly under Jails, of Rs. 6,93,000 compared with the original estimate. The amount of the original estimate under Jails was Rs. 22,52,000. This included a provision of Rs. 11,26,000 for jail manufactures, but from the information now available it does not appear that the actual expenditure has exceeded Rs. 7,00,000. There have also been considerable savings under Central Jails, District Jails, and Lock-ups.

32. *Police*.—The regular estimate shows an increase of Rs. 32,000 on the original estimate. Some increase is expected under village police, and some under superintendence.

33. *Marine*.—The original estimate for 1881-82 provides for an expenditure of Rs. 12,17,000. There have been savings in consequence of the transfer of the Calcutta Port Approaches to the Port Commissioners. The regular estimate amounts to Rs. 10,97,000.

34. The regular estimate, compared with the original, shows a decrease of Rs. 13,000 under *Education*, and of Rs. 1,000 under *Ecclesiastical*. The decrease of Rs. 32,000 under *Medical* is owing to anticipated savings in the cost of hospitals and dispensaries, Medical Schools and Colleges, and Lunatic Asylums, and in the grants for medical purposes.

35. *Stationery and Printing*.—An increase of Rs. 73,000 is provided in the regular estimate. The grant under "Government Presses" was found to be insufficient, owing to the press of work in connection with the Census operation, and to the necessity of purchasing new machines.

There was also some increase in the disbursements for printing at private presses by the Opium Department in the Benares Agency. The attention of the Board of Revenue has been drawn to this.

36. *Superannuation*.—The increase under this head is due to the payment of a moiety of the pension of the late Director of the Wards' Institution, Calcutta, and to the payment of the pension of the late Collector of Tolls, Burdwan Division.

37. *Miscellaneous*.—The gross charge under this head is liable to considerable variation. The regular estimate provides for an increase of Rs. 13,000. The increase is mainly under "Miscellaneous and unforeseen charges."

38. The grant fixed by this Government for expenditure on *Public Works* of all kinds during 1881-82 was Rs. 1,34,33,000. Looking to the unanticipated increase of revenue under Excise and decrease of expenditure under Law and Justice, the Lieutenant-Governor, in the course of the year, sanctioned additional grants amounting to over Rs. 7,32,000. It has been ascertained that the whole of this amount could not be appropriated during the year, and that the total expenditure has not exceeded Rs. 1,36,69,000. The extra grants were divided thus:—*Railways* (Surveys Rs. 2,52,000, and Dinagepore-Parbutipore line Rs. 1,33,000), Rs. 3,85,000; *Irrigation* (maintenance of tuccavi embankments, Rs. 50,000; *Other Public Works* (acquiring land near Medical College Rs. 1,59,000, road from Sevoke to the Teesta river Rs. 1,00,000, etc.), Rs. 2,97,000.

39. *Contributions*.—Under this head come the payments for work done by the District Road Establishments in collecting the Provincial Public Works Cess, as well as grants to the three districts—Southal Pergunnahs, Singbhoon and Chittagong Hill Tracts—in which the Road Cess Act is not in force. The Lieutenant-Governor also found himself in a position to make special grants for road construction and other improvements in several districts.

These grants will be further referred to in another place. The total grants during 1881-82 amounted to Rs. 3,33,000.

40. *Closing balance.*—As stated above, the year 1881-82 is expected to close with a credit balance of Rs. 72,49,000. The Government of India estimate that the balance may not exceed Rs. 70,88,000. The difference between the two estimates is made up thus:—

		Regular estimate, 1881-82.	
		Local Government.	Government of India.
<i>Receipts.</i>		Rs.	Rs.
Excise	...	95,00,000	95,00,000
Provincial rates	...	35,50,000	35,40,000
Stamps	...	1,20,00,000	1,18,00,000
Registration	...	10,00,000	9,92,000
Minor Departments	...	1,91,000	1,80,000
Law and Justice	...	17,10,000	16,00,000
Marine	...	11,00,000	10,44,000
Education	...	5,30,000	5,28,000
Stationery and Printing	...	1,22,000	1,34,000
Miscellaneous	...	6,55,000	6,89,000
Allotment for loss by exchange in stationery stores	...	94,000	.....
Grants for payments made from Provincial Funds for the purchase of Port Canning debentures	...	28,000	.....
		3,04,80,000	3,03,07,000
Difference	...	1,78,000	
<i>Expenditure.</i>			
Land Revenue	...	27,00,000	26,93,000
Excise	...	2,70,000	2,65,000
Salt	...	22,000	17,000
Minor Department	...	3,00,000	4,25,000
Law and Justice	...	84,28,000	84,23,000
Stationery and Printing	...	9,37,000	8,22,000
		1,26,57,000	1,26,45,000
Difference	...	12,000	
Net difference	...	1,61,000	

The difference of Rs. 1,25,000 in expenditure under the head of Minor Departments is due to a part of the cost of Census operations being debited to Provincial Funds. The Lieutenant-Governor trusts, however, that the original proposal, that the entire expenditure on this account would be borne by the Imperial Revenues, will be adhered to. The percentage of Land Revenue made over to this Government in the new financial settlement has also, as will be shown below, been calculated on the regular estimate of the local Government, which was prepared on the latest information available. The estimated closing balance for the year 1881-82, or the opening balance for 1882-83, will therefore be taken at Rs. 72,49,000.

#### RESULTS OF THE FINANCIAL ADMINISTRATION OF THE FIVE YEARS.

41. In the resolution of 24th June 1881 Sir Ashley Eden instituted a comparison between the revenue and expenditure of the five years 1877-82. These five years cover the period affected by the contract under which the first great advance in the policy of decentralization was made. They also coincide with the term of Sir Ashley Eden's administration. His Government

would therefore have been responsible for any failure that might have resulted apart from calamities of season or other abnormal causes. On the other hand the local Government may fairly claim some share in any advantage which the province may during this five years' term have derived from careful administration and judicious expenditure. In the resolution of June the Lieutenant-Governor was able only to take the budget estimates for 1881-82. He is now able to substitute the figures of the regular estimate, which may be taken to be approximately correct. The following statement shows the revenue and expenditure of each of the five years :—

## Revenue.

	1877-78.	1878-79.	1879-80.	1880-81.	Regular estimate, 1881-82.
	Rs.	Rs.	Rs.	Rs.	Rs.
Opening balance	2,38,000	*20,90,000	42,79,000	51,04,000	49,91,000
Land Revenue	1,07,000	.....	.....	.....	.....
Excise	69,68,000	70,23,000	72,07,000	83,03,000	96,00,000
Assessed Taxes	.....	2,38,000	4,74,000	3,59,000	3,50,000
Provincial Rates	21,05,000	36,40,000	38,14,000	35,15,000	36,50,000
Customs	75,000	99,000	90,000	1,30,000	80,000
Salt	2,72,000	1,24,000	1,03,000	1,35,000	1,60,000
Stamps	1,08,15,000	1,07,65,000	1,14,99,000	1,13,42,000	1,20,00,000
Registration	6,61,000	8,99,000	10,29,000	10,30,000	10,60,000
Minor Departments	.....	4,25,000	1,51,000	1,65,000	1,91,000
Law and Justice—					
Law and Justice Proper	8,05,000	10,52,000	10,80,000	17,58,000	17,10,000
Jails	6,89,000	5,94,000	6,20,000	.....	.....
Police	92,000	4,2,000	4,76,000	4,90,000	5,26,000
Marine	14,57,000	11,70,000	11,23,000	12,76,000	11,60,000
Education	5,20,000	4,80,000	4,52,000	4,85,000	5,30,000
Medical	1,50,000	1,95,000	2,66,000	1,88,000	1,38,000
Stationery and Printing	78,000	1,10,000	98,000	1,23,000	1,22,000
Interest	.....	45,000	12,000	13,000	20,000
Miscellaneous	8,83,000	7,06,000	8,48,000	7,55,000	6,55,000
Railways	7,32,000	17,53,000	26,14,000	29,60,000	32,19,000
Irrigation and Navigation	4,95,000	15,27,000	16,09,000	16,71,000	17,62,000
Other public works	96,000	8,38,000	7,56,000	6,86,000	6,90,000
Contributions	.....	.....	6,000	.....	2,000
<b>Total Revenue</b>	<b>2,69,11,000</b>	<b>3,20,78,000</b>	<b>3,41,73,000</b>	<b>3,56,40,000</b>	<b>3,73,05,000</b>
Imperial allotment	48,55,000	47,57,000	46,66,000	40,39,000	83,84,000
<b>GRAND TOTAL</b>	<b>3,20,54,000</b>	<b>3,95,25,000</b>	<b>4,31,17,000</b>	<b>4,47,83,000</b>	<b>5,06,89,000</b>

\* Includes Rs. 14,52,000 transferred from "Provincial Reserves" and Rs. 44,000 transferred from the old "Wards" Fund.

## Expenditure.

	1877-78.	1878-79.	1879-80.	1880-81.	Regular estimate, 1881-82.
	Rs.	Rs.	Rs.	Rs.	Rs.
Interest	20,00,000	32,14,000	34,93,000	36,33,000	33,71,000
Refunds	6,32,000	6,51,000	9,34,000	7,39,000	7,54,000
Land Revenue	34,37,000	25,43,000	25,09,000	27,30,000	27,09,000
Forest	1,000	.....	.....	.....	.....
Excise	3,06,000	3,83,000	3,61,000	3,62,000	3,70,000
Assessed Taxes	.....	2,70,000	1,95,000	1,68,000	1,00,000
Provincial Rates	10,000	13,000	.....	.....	.....
Customs	7,16,000	6,90,000	6,95,000	6,98,000	6,95,000
Salt	40,000	48,000	33,000	18,000	22,000
Opium	.....	.....	.....	1,000	.....
Stamps	2,48,000	2,51,000	3,81,000	3,99,000	4,34,000
Registration	4,68,000	5,09,000	6,04,000	6,38,000	6,60,000
Administration	15,32,000	14,77,000	14,57,000	14,70,000	14,84,000
Minor Departments	3,65,000	2,46,000	2,80,000	2,75,000	3,00,000
Law and Justice—					
Law and Justice Proper	63,77,000	64,63,000	65,67,000	83,76,000	84,28,000
Jails	18,51,000	18,56,000	18,41,000	.....	.....
Police	41,87,000	40,24,000	40,12,000	40,18,000	41,32,000
Marine	12,72,000	12,37,000	10,68,000	10,85,000	10,97,000
Education	25,24,000	24,98,000	24,75,000	25,50,000	26,77,000
Medical	8,000	8,000	9,000	8,000	8,000
Stationery and Printing	13,85,000	12,31,000	11,70,000	11,10,000	10,93,000
Superannuations	8,61,000	9,32,000	8,73,000	9,46,000	9,37,000
Miscellaneous	8,21,000	2,82,000	4,32,000	2,000	6,000
Railways	6,20,000	13,67,000	20,05,000	18,98,000	32,16,000
Irrigation and Navigation	7,93,000	15,20,000	18,01,000	24,54,000	37,01,000
Other public works	25,12,000	33,46,000	33,72,000	47,60,000	60,92,000
<b>Total</b>	<b>3,04,80,000</b>	<b>3,50,82,000</b>	<b>3,65,17,000</b>	<b>3,65,96,000</b>	<b>4,30,98,000</b>
Contributions to Local	.....	1,94,000	1,81,000	1,90,000	3,33,000
Ditto to Imperial	.....	.....	13,15,000	10,00,000	.....
<b>Closing Balance</b>	<b>3,08,00,000</b>	<b>3,52,40,000</b>	<b>3,80,13,000</b>	<b>3,97,02,000</b>	<b>4,51,31,000</b>
<b>GRAND TOTAL</b>	<b>3,20,54,000</b>	<b>3,95,25,000</b>	<b>4,31,17,000</b>	<b>4,47,83,000</b>	<b>5,06,89,000</b>

42. It was explained in the last review that the year 1877-78 cannot properly be compared as a whole with the succeeding years, and that it would be misleading to say without qualification that the revenue has increased from Rs. 2,69,11,000 in 1877-78 to Rs. 3,73,05,000 in 1881-82. The whole amount of



the public works cess could not be levied during the first year, and revenue subsequently shown in the general accounts of the provincial services then found place under the separate head of "Provincial Reserve." Moreover, the License-tax had not then been introduced, and the grant since made from the Imperial Revenues for the administration of the tax has no corresponding entry in the accounts of 1877-78. It will be possible to compare individual heads of revenue and expenditure, but the general results can only be compared between 1878-79 and 1881-82. It appears, then, that the revenues have increased during these four years from Rs. 3,20,78,000 to Rs. 3,73,05,000, while the expenditure has increased from Rs. 3,52,46,000 to Rs. 4,31,31,000. The period opened with a credit balance of Rs. 26,90,000. It closes with a credit balance, exclusive of the 28½ lakhs of special contribution from the Government of India in connection with the new contract, of Rs. 43,99,000. The revenue has increased at the rate of no less than 17½ lakhs a year, though there has been no taxation during the interval.

43. The following items are instructive as showing the advance made by the Province between 1877 and 1882 :—

<i>Revenue.</i>				
		1877-78.	1881-82.	Increase.
		Rs.	Rs.	Rs.
Excise	...	68,68,000	95,00,000	26,32,000
Stamps	...	1,08,15,000	1,20,00,000	11,85,000
Law and Justice	...	8,05,000	9,10,000	1,05,000
Jails	...	6,89,000	8,00,000	1,11,000
Railways	...	7,32,000	32,19,000	24,87,000
Irrigation and Navigation	...	12,61,000	17,62,000	5,01,000
<i>Expenditure.</i>				
Land Revenue	...	24,37,000	27,00,000	2,63,000
Administration	...	13,22,000	14,86,000	1,64,000
Law and Justice	...	63,77,000	68,38,000	4,61,000
Education	...	25,24,000	26,77,000	1,53,000
Railways	...	6,26,000	32,16,000	25,90,000
Irrigation and Navigation	...	*15,20,000	37,61,000	22,41,000
Other Public Works	...	25,39,000	66,92,000	41,53,000
Contribution to local objects	.....		3,33,000	3,33,000
<i>Decrease.</i>				
Jails	...	16,51,000	15,90,000	61,000
Medical	...	13,85,000	10,93,000	2,92,000

\* 1878-79.

The three items of revenue which show the largest increase are Excise (26½ lakhs), Railways (25 lakhs), Stamps (12 lakhs), and Irrigation and Navigation (5 lakhs). The items of expenditure which show the largest increase are Other Public Works (41½ lakhs), Railways (26 lakhs), Irrigation and Navigation (22½ lakhs), Law and Justice (4½ lakhs), Land Revenue (2½ lakhs), Administration (1½ lakhs), and Education (1½ lakhs).

44. Under EXCISE the increase has been exceptionally rapid during the past two years in consequence of the abundance of the harvests, the cheapness of food, and the general increase in the prosperity and comfort of the people. These two years have also seen the outstill system for the manufacture and sale of country spirits in force throughout the greater part of the interior of the province. Sir Ashley Eden has on many occasions expressed his conviction that this is the only sound system for the administration of an excise on spirits in rural tracts in Bengal, and it is not necessary to repeat here the arguments on which that conviction is founded. It is not possible, however, to credit the outstill system with more than a subordinate share in the increase of revenue. The outstill system was largely in force in 1877-78 and 1878-79, as well as in the later years. In the first years, however, owing to the demand for food elsewhere, the cost of grain was exceptionally high, and the increase in the excise revenue was trifling. In 1880-81 and 1881-82 the prices of food have been unprecedentedly low, while the harvests have been abundant. It has been stated in some

quarters that the increase of revenue has resulted from the excessive number of stills licensed, and the undue facilities afforded for procuring liquor. Sir Ashley Eden, while issuing the strictest orders against the undue multiplication of shops, has more than once urged upon his officers that the tendency of such a policy must be adverse to the interests of the revenue as well as to the well-being of the people. He has pointed out that if shops are too numerous competition among bidders for licenses will be diminished, low fees will be paid to Government, and consequently low prices will be charged for liquor to the consumer. If, on the other hand, only so many stills are licensed as will meet the requirements of the people and prevent illicit manufacture, candidates for licenses will compete and pay such fees for the licenses as will leave them only a fair margin of profit. The interests of the revenue will be protected, while the cost of liquor to the consumer will be raised to such a price as he will be willing to pay rather than take the risks of smuggling. The results of the settlements for 1882-83 entirely confirm these views. The number of outstills has been reduced from 5,386 to 4,216, while the collections for March, which include heavy advance payments on account of new licenses, have reached the highest figure yet attained.

Apart from this, however, two unerring tests can be appealed to:—(1) the consumption of exciseable articles other than country spirits; (2) the consumption of exciseable articles, including country spirits, in places where the outstill system is not in force. The fees for licenses to sell imported liquors, the customs duty on imported liquors passing into consumption, the receipts from fermented liquors such as pachwai and tari, and the receipts from opium, ganja, and other drugs, all showed a large increase in 1880-81 over 1879-80. The increase from ganja was Rs. 1,64,516, and, notwithstanding that Government raised the selling price of excise opium during the year, the revenue from this source rose from Rs. 15,54,000 to Rs. 16,44,000. Detailed statistics are not yet available for 1881-82, but it has been ascertained that the receipts from the sale alone of excise opium, apart from the license fees, have increased from 13½ lakhs to 14½ lakhs, or by more than 7 per cent. in this one year. The second test is even more convincing. Of the gross increase of 9½ lakhs in the revenue in 1881-82 over 1880-81, Calcutta, where the outstill system is not in force, contributed more than 2½ lakhs, the revenue having risen from 14½ lakhs to more than 17 lakhs. In other words the increase of revenue in Calcutta—a sudder distillery area—was 18 per cent. In the interior, including some tracts still under the sudder distillery system, the increase was only 9·8, or something more than half the rate of increase obtained in Calcutta. For the consumption of spirits in 1881-82 in the sudder distillery areas outside Calcutta no statistics are yet available, but it is instructive to remark that in Hazaribagh, while the number of shops was constant, it rose from 34,871 gallons in 1879-80 to 43,750 gallons in 1880-81, and that in Lohardugga, with a decrease of one shop, it rose from 17,619 to 20,149. Sir Ashley Eden has no doubt that the large increase in the excise revenue is a matter for congratulation, and that it bears testimony to the increased prosperity of the people, as well as to increased efficiency in the administration. The increase in revenue, however, is not necessarily the measure of increased consumption, for a greater quantity of the spirits consumed has paid duty than could have been the case under the old system. It is not probable that the revenue from this source will continue to show the same rate of progress as the past two years have seen, but it is expected that the receipts in the current year will amount to Rs. 1,00,00,000.

45. The revenue from STAMPS has increased less markedly but more steadily than the revenue from excise. The increase of about 12 lakhs is made up of an increase of 7 lakhs between 1878 and 1880 and an increase of 5 lakhs between 1880 and 1882. It is reasonable to attribute these results, partly to the increased circulation of wealth in the country and the increased facilities for obtaining justice, and partly to improved administration and special vigilance in the prevention and detection of fraud.

46. Under LAW and JUSTICE, LAND REVENUE, and ADMINISTRATION there has been an increase in expenditure of 4½, 2½, and 1½ lakhs

respectively. This represents large improvements in the machinery of the administration. Establishments have been strengthened and the salaries of some underpaid classes of ministerial officers have been revised, additions have been made to the staff of the Subordinate Executive Service, and the number of Judicial Officers has been increased to provide for the speedy and efficient administration of civil justice. It will be seen further on that the estimates of the current year include a provision for a general improvement of the salaries of both the Subordinate Executive and the Subordinate Judicial Service.

47. Under JAILS there has been an increase of Rs. 1,11,000 in the receipts and a decrease of Rs. 61,000 in the expenditure. The Jail Department now earns in cash through its manufactures more than half the cost of maintaining the department. This does not include printing, and the supply of clothing, oil and other articles to the different departments of Government, which are only acknowledged by book-credits.

48. The expenditure on EDUCATION has increased by more than a lakh and a half. One lakh of this represents an addition to the grant of primary education which was reduced under financial pressure in 1876-77. The estimates for the current year provide for a further increase of nearly three lakhs on education, including a further addition of one lakh to the primary grant.

49. The decrease of nearly three lakhs under MEDICAL represents savings effected in the management of Metropolitan Hospitals, the revision of grants to dispensaries in the interior, and the substitution of fixed allowances for the previous system of giving free supplies of expensive instruments and drugs. As was stated in the last review, this reduction in cost has been accompanied by an increase in the number of persons actually receiving medical aid.

50. The gross revenue from RAILWAYS has increased from Rs. 7,32,000 in 1877-78 to Rs. 32,19,000 in 1881-82, or at the rate of about  $6\frac{1}{4}$  lakhs a year. The expenditure has at the same time increased from Rs. 6,26,000 to Rs. 32,16,000. In order to obtain a correct view of the condition of this branch of the revenue, it is necessary to eliminate the expenditure on working expenses, and to show, on the one hand, what net revenue has been obtained, and, on the other, what money has been expended on permanent works. The following statement shows the gross receipts and working expenses in each year with the budget estimate for the current year:—

	1877-78.	1878-79.	1879-80.	1880-81.	Regular, 1881-82.	Budget, 1882-83.	
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
Gross receipts ...	7,32,000	17,53,000	25,14,000	29,58,000	32,19,000	33,90,000	
Working expenses ...	6,69,000	12,53,000	19,23,000	16,70,000	19,08,000*	19,52,000	
	1,63,000	5,00,000	5,91,000	12,82,000	13,11,000	14,38,000	* Includes cost of four new locomotives for Calcutta and South-Eastern line.

The estimate of 1881-82 is disturbed by the inclusion of a sum of Rs. 1,00,000 on account of new locomotives for the Calcutta and South-Eastern line. If this were eliminated, the net profits of the year would have amounted to Rs. 14,11,000, or more than  $8\frac{1}{2}$  times the profit made four years before, when railways were first made over to Provincial management. The progress of the charges for interest was fully examined in the last review. As a rule, these charges cannot be conveniently compared with the receipts of any one year, as heavy charges are necessarily incurred on account of large works before they can be opened. Thus the charges for 1881-82 include interest at half rates on more than 29 lakhs of capital expended on the extensions of the Tirhoot system, which cannot be opened till late in the current year. Nevertheless it is interesting to note that the true net receipts, after excluding the accounts of the Calcutta and South-Eastern line, on the capital of which no interest is payable by the local Government, were Rs. 13,41,000, while the interest on the capital expended was only Rs. 12,89,000. In other words the other railways brought in a direct profit to Government after payment of all expenses, while the province enjoyed the enormous indirect advantages derived from them, without any cost.

The percentage of profit earned in 1881-82, and expected in 1882-83, on each of the three great lines under this Government is:—

			1881-82.	1882-83.
Northern Bengal	...	...	4.4	5.
Patna and Gya	...	...	4.5	5.2
Tirhoot	...	...	4.1	5.3

The rate of interest payable on the capital employed in the construction of these lines is now only 4 per cent.

51. It has been a matter of great regret to Sir Ashley Eden that, while the limitation placed upon the expenditure of funds on Productive Public Works by the Government of India seriously restricted the amount of capital assigned to Bengal for the construction of new lines, he was also for a long time fettered by special rules in the allotment of Provincial funds for these all-important works. Of late, however, a more liberal policy has been pursued, and he has been enabled to apply a part of the surplus revenues of the province to the construction of two lines, one from Sonapore on the South-Eastern Railway to Diamond Harbour, and the other from Parbatipore on the Northern Bengal Railway to the head-quarters station of the district of Dinagore. It is much to be regretted, that the Provincial revenues could not be sooner utilized in developing its resources. A considerable provision has, however, been made for expenditure on Provincial Railways in 1882-83. The expenditure on railways from all sources, borrowed capital and Provincial funds, will, in the current year, amount to Rs. 45,49,000.

52. The amounts expended on Provincial funds, on surveys and construction in each year, and estimated for expenditure during the current year, are given below:—

					Rs.
1877-78	...	...	...	...	57,000
1878-79	...	...	...	...	94,000
1879-80	...	...	...	...	3,97,000
1880-81	...	...	...	...	2,22,000
1881-82	...	...	...	...	13,08,000
					20,78,000
1882-83	...	...	...	...	13,18,000
					36,96,000

The sum of Rs. 20,78,000 includes Rs. 11,22,000 spent on the Diamond Harbour line, Rs. 3,15,000 spent on the Patna-Gya line but shown as a contribution to Imperial funds which advanced the remainder of the capital, and Rs. 2,50,000 spent on the Parbatipore and Dinagore line. The remainder represents expenditure on surveys for new lines, on improvements on the Calcutta and South-Eastern line, and on the Deoghur Tramway.

The estimate for 1882-83 provides for the expenditure of Rs. 8,88,000 on the Diamond Harbour line, six lakhs on the Dinagore line, and Rs. 1,30,000 on surveys.

53. The receipts under IRRIGATION and NAVIGATION have increased from Rs. 12,61,000 in 1877-78 to Rs. 17,62,000 in 1881-82. The last review gave details of the financial history of each of the Irrigation schemes under this Government during the five years since 1877, and it is unnecessary to repeat them here. It is sufficient to say that Sir Ashley Eden is convinced that the Sone system will ultimately prove both economically and financially successful, and that, where a complete system of distributaries for the Orissa Canals permits of the full utilization of the expensive head works, these canals will also afford a satisfactory return on the capital invested.

The amount expended from Provincial Funds under this branch, over and above working expenses, in each of the past four years, has been—

1878-79.	1879-80.	1880-81.	1881-82.	Total.
Rs.	Rs.	Rs.	Rs.	Rs.
3,49,000	5,52,000	10,60,000	19,29,000	38,90,000

This includes the expenditure of Rs. 8,84,000 on the Orissa Coast Canal, Rs. 6,34,000 on the Sârun Canal, Rs. 5,73,000 on the Joojooty Project for the improvement of the water-supply of the Burdwan and Hooghly districts,



Rs. 16,21,000 on the improvement of the Calcutta Canals, and Rs. 1,52,000 on the improvement of the Orissa tidal creeks.

54. Under OTHER PUBLIC WORKS the expenditure has increased from Rs. 25,39,000 to Rs. 66,92,000. Fortunately Sir Ashley Eden was not fettered by special rules in the expenditure of funds on these works. The rules permitted him to erect buildings without limit, though they did not permit him to construct railways. Even in this branch, however, the expenditure was for a time seriously restricted, owing to the financial difficulties which famine, war, and adverse exchange had brought on the Government of India. Nevertheless Sir Ashley Eden has found it possible to expend large sums on works without which the administration could not be efficiently conducted, and the construction of which had been postponed for many years for want of funds. Substantial court-houses, jails, and public offices have been supplied where they were urgently required, and no expenditure has been spared where it could be devoted to the improvement of communications. The gross expenditure during the five years has amounted to Rs. 1,33,20,000 on construction and Rs. 75,31,000 on repairs.

55. Sir Ashley Eden has also been able to make considerable CONTRIBUTIONS in aid of projects undertaken by local bodies. During the year 1881-82, the grants thus made, including the general allotment of Rs. 46,800 for the collection of the Public Works Cess, amounted to Rs. 3,38,000. Grants of Rs. 65,883 were made to the Nuddea District Road Fund for the repair of a railway feeder road and the construction of bridges for the improvement of the drainage. The Sonthal Pergunnahs received Rs. 49,058, Dinagepore Rs. 30,000, Balasore Rs. 25,000, and other districts and municipalities smaller sums for the construction or repair of roads, or for drainage and water-supply works. In the current year the large provision of Rs. 13,50,000 has been made for this purpose, and grants have already been made of Rs. 50,000 to the Suburban Municipality and Rs. 50,000 to the Burdwan Municipality, towards the cost of schemes for water-supply. From this source must also come special grants for the furtherance of the important object of local self-government.

56. The results of the five years' financial administration may thus be summed up. The revenue has increased by 26½ lakhs under Excise, 23 lakhs under Railways, 12 lakhs under Stamps, and 5 lakhs under Irrigation and Navigation. The general increase since 1878-79 has been at the rate of 17½ lakhs a year. Improvements have been made in the general administration, and the expenditure under the great heads of Land Revenue, Administration, and Law and Justice, has in consequence been increased by 8 lakhs of rupees a year between 1877 and 1882. The funds available for Education have been increased, while the charges of the two spending Departments of Jails and Medical have been reduced. Finally Sir Ashley Eden has spent during the five years from the surplus revenues of the province, Rs. 20,78,000 on Railway works, Rs. 39,00,000 on Irrigation and Navigation works, and Rs. 141,00,000 on the construction of Roads and Buildings, or in contributions to district works: in all Rs. 200,00,000 on original works of all kinds. This useful expenditure would have been even greater had not the Government of India exacted from the Provincial Revenues a special contribution of Rs. 20,00,000 for its own purposes. This contribution has now been generously returned, but it only goes to swell the closing balance at the credit of the Province. The five years' period opened with a credit balance of Rs. 2,88,000. It closes with a credit balance of Rs. 42,62,000, exclusive of the special grant which forms a part of the new contract.

#### THE NEW CONTRACT.

57. Such have been the results of the five years' contract of 1877. The new contract is roughly based on the regular estimates of the last year of the old one. The principle of this contract is that, instead of giving the local Government a fixed sum of money to make good any excess of provincialized expenditure over provincialized receipts, a certain proportion of the Imperial revenue will be devoted to this object. A few heads are reserved a

Imperial; others are divided in proportions, for the most part equal, between Imperial and Provincial; the rest are made Provincial. The balance of transfers, being against the local Government, is rectified by a fixed percentage on its Land Revenue otherwise reserved as Imperial. At the same time a distinct declaration has been made of the policy to be followed during the term of the contract. The Imperial Government will make no demand on the local Government except in the case of disaster so abnormal as to exhaust the Imperial reserves and resources, and to necessitate a suspension of the entire machinery of public improvement throughout the empire. On the other hand the local Government must look for no special aid from the Imperial Government except in the case of severe famine, and then only within the following limits:— 1) current income must have been exhausted, every avoidable expense in every department having been retrenched and the public works grants having been applied to famine work to the very utmost possible; (2) saving of past years in excess of the ordinary working balance must have been drawn up to two-thirds of their total amount; (3) the margin of Provincial surplus in normal years will be liable for the completion of works begun as relief works, and where there is no need of such, completion will be chargeable up to one-fourth at most for payment of interest on any Imperial loans which may have been raised to meet the excess cost of the famine in general.

58. The following are the principal additions made to the provincial receipts and charges under the new scheme. This Government will be admitted to a half share in the receipts from Forests and Assessed Taxes, and will take all the receipts under the heads of Superannuations, Miscellaneous, and Other Public Works, except contributions from the military and medical funds; gain by exchange on Imperial transactions; Premium on bills and unclaimed bills of exchange; receipts from military work; and any unspecified miscellaneous receipts exceeding Rs. 10,000. Under Forests and Assessed Taxes it will be liable for half the charges. The Imperial Government will now only retain under Land Revenue the same percentage on charges for collection and on the cost of surveys and settlements as was retained of land revenue. To the present provincial charges will be added under Law and Justice and Medical all that was reserved as Imperial; under Stationery and Printing all except the cost of stationery purchased from central stores; and under Other Public Works, the charges for Museums, Educational Buildings, and Light-houses. On the other hand, one-half the net receipts from Excise, Stamps, and Registration, including record-room fees, will be surrendered to the Imperial Government. The percentage of Land Revenue has, however, only been calculated after allowing for the claim of the Government of India to share in the general improvement that has resulted to the Provincial revenues during the five years just expired. That share has been fixed at 30 lakhs a year. From this the Government of India have deducted 3 lakhs to be expended on the improvement of the Subordinate Executive and Judicial Services and the establishment of the new district of Khoolna. In order, too, that the local Government might not be embarrassed by a sudden reduction of 27 lakhs in its income, His Excellency the Governor-General in Council has added a sum of 28½ lakhs to the credit balance of the Province for 1881-82.

59. The amount of percentage of Land Revenue which, under the new scheme, will be assigned to this Government, has been calculated, as was stated above, upon the basis of the regular estimate for the year 1881-82. It has been fixed at 32·2248. A sum of Rs. 30,00,000 has, on account of the annual contribution to the Government of India, been added to the Provincial deficit, provision being at the same time made for an additional expenditure of three lakhs for the improvement of the subordinate Civil Service and for a new district of Khoolna; on the other hand the receipts from Excise have been increased by Rs. 55,000, being half the estimated duty on Shahjehanpore rum for the current year.

#### BUDGET ESTIMATES FOR 1882-83.

60. The Lieutenant-Governor has already in separate resolutions reviewed the estimates of receipts and expenditure for the current year. A brief summary only of the general character of these estimates need now be given.

## RECEIPTS.

61. *Land Revenue*.—The provincial share of land revenue is, as shown above, 32·2248 per cent. of the gross receipts. The total receipts are estimated at Rs. 3,78,49,000. The provincial share therefore amounts to Rs. 1,21,98,000. To this is added a sum of Rs. 3,00,000, being ten per cent. on the collections from Government estates, which, under the orders of the Government of India, is to be appropriated to the management and improvement of those estates. The Government of India estimate this percentage at Rs. 2,18,000. But as the collections from Government estates are estimated at Rs. 30,00,000, the local estimate of Rs. 3,00,000 on this account will be retained.

62. *Forests*.—This is an improving branch of revenue, the receipts having risen from Rs. 87,260 in 1871-72 to Rs. 4,32,363 in 1877-78, while it was estimated by this Government that they would amount to Rs. 7,10,000 in 1882-83. The Government of India have reduced the estimate to Rs. 7,00,000, and one-half of this amount will be entered in the provincial estimate.

63. *Excise*.—The gross revenue from excise has been estimated at Rs. 1,00,00,000 for 1882-83. To this has been added the estimated income from duty on Shahjehanpore rum, amounting to Rs. 1,10,000. One-half of the total receipts belongs to provincial.

64. *Assessed Taxes*.—The regular estimate of the gross revenue from license tax, including refunds, amounts to Rs. 16,50,000. The Board have been asked to impress upon Collectors the necessity of exercising prudence in requiring payments in cases in which there is probability of a claim to refund being established. The refunds of license tax for the current year have been estimated at Rs. 30,000, against Rs. 80,000 for 1881-82. The estimate for the current year, amounting to Rs. 16,00,000, has been accepted by the Government of India, and will stand.

65. *Provincial Rates*.—The Accountant-General estimated the receipts from Public Works Cess at Rs. 35,10,000. The estimate is based on the actual demand, no deduction being made for possible short collections, as the Board of Revenue expect that the total collections will be equal to the current demand. In view of the revaluations in progress, the Lieutenant-Governor has raised the estimate to Rs. 35,25,000. The estimate of the total receipts under Provincial rates, as originally passed by this Government, was Rs. 35,76,000. But the Board of Revenue subsequently pointed out that their original estimate of Rs. 13,000 for the four-anna rate on Wards and Attached Estates for treasury establishments, which was reduced by Government to Rs. 10,100, was calculated on the total current demand of rent of all the estates amounting to Rs. 52,00,000. The estimate has accordingly been raised by Rs. 2,000. The total receipts therefore will stand at Rs. 35,78,000.

66. *Customs*.—The provincial receipts are derived from wharf rents, confiscations and penalties, and miscellaneous items. The estimate of the local Government, amounting to Rs. 85,000, has been accepted by the Government of India.

67. *Salt*.—The sources of the provincial income under this head are rents of wharf-houses, fines and forfeitures, and miscellaneous. The receipts have been estimated at Rs. 1,39,000.

68. *Stamps*.—The Accountant-General estimates the total revenue from stamps at Rs. 1,15,00,000. It is expected that the receipts by the end of the year 1881-82 may have amounted to Rs. 1,20,00,000. The same amount has been entered for next year. The receipts are equally divided between the Imperial and Provincial Governments.

69. *Registration*.—The regular estimate for 1881-82 amounts to Rs. 10,00,000. A slight increase in the estimate for 1882-83 is expected from fees for searches under the High Court's order of August 1880, which requires every applicant for an order for sale for immoveable property, to file an affidavit that he has searched, or caused to be searched, the registers of registering officers to ascertain whether there are any encumbrances on the property to be put to sale. An increase is also expected under Revenue Record-room receipts. The total receipts are estimated at Rs. 10,11,000, a moiety of which is provincial.

70. *Minor Departments*.—The estimate for 1882-83 amounts to Rs. 1,91,500 against Rs. 1,91,000, the regular estimate for the year 1881-82.

71. *Law and Justice.*—The receipts from Law and Justice (proper) are estimated at Rs. 9,06,000. The jail proceeds were originally estimated by the Inspector-General at Rs. 13,12,670 against Rs. 9,00,000, the sanctioned estimate for 1881-82, but he subsequently reduced his estimate to Rs. 8,04,000. The total receipts have thus been put at Rs. 17,10,000. The estimate has been adopted by the Government of India.

72. *Police.*—Increased receipts are expected under the sub-head "Receipts on account of village police in Lohardugga" owing to the adoption of a new plan under which the salaries of the majority of the chowkidars and ghatwals will be realized under the coercive provisions of Act VIII (B.C.) of 1878. The total receipts are estimated at Rs. 5,46,000.

73. *Marine.*—The actual receipts in 1880-81 were Rs. 12,75,687, and the regular estimate for 1881-82 amounts to Rs. 11,00,000. The estimate, for 1882-83 is to Rs. 8,23,000. The decrease in the receipts for 1881-82 and 1882-83 is due, as has already been explained, to the transfer of the port dues with the port approaches to the Port Commissioners, and the reduction of 15 per cent. in the pilotage receipts.

74. *Superannuation.*—These receipts were Imperial, and have been made Provincial under the new contract. The receipts in 1880-81 were Rs. 68,652, and the regular estimate for 1881-82 amounts to Rs. 70,000. The estimate for 1882-83 is Rs. 71,000.

75. *Miscellaneous.*—The receipts under this head aggregated Rs. 7,53,154 in 1880-81. Great strictness are now observed in the scrutiny of deposits. Items that were formerly entered as deposits and afterwards credited to Government as lapsed are now in many cases taken at once to service heads. The total receipts for 1882-83 were estimated at Rs. 6,33,000, and this estimate has been adopted by the Government of India, but to this should be added the sale proceeds of miscellaneous durbar presents, amounting to Rs. 10,000, which have now been made Provincial. The estimate therefore stands at Rs. 6,43,000.

76. *Railways.*—The original estimate of this Government was Rs. 36,20,000, viz.:—

	Rs.
Northern Bengal State Railway ... ..	20 70,000
Tirhoot State Railway ... ..	7 50,000
Patna and Gya ... ..	5 33,500
Calcutta and South-Eastern ... ..	2 00,000
Nalhati ... ..	66,500
Total ... ..	36 20,000

The Government of India consider the estimates under Northern Bengal and Patna and Gya Railways too sanguine, and have reduced the estimates to Rs. 19,50,000 and Rs. 5,25,000 respectively. In view of the large receipts of the current year and of the stimulus that will probably be given to internal trade by the remission of the import duties and the reduction of the duty on salt, the Lieutenant-Governor prefers to adhere to the original estimate, Rs. 36,20,000.

77. *Irrigation.*—The receipts in 1880-81 and 1881-82 received a check from the low prices of food-grains, which induced the people to hold up their stocks. The receipts for 1882-83 are estimated at Rs. 14,90,000.

78. *Other Public Works.*—The receipts from ferries and cemeteries are estimated at Rs. 5,17,000, and for other public works hitherto Provincial at Rs. 1,70,000. A sum of Rs. 15,000 on account of Imperial Public Works has been added. The total estimate thus stands at Rs. 7,02,000.

79. *Balance of the Estates Improvement Fund.*—As the Estates Improvement Fund has been abolished under the orders of the Government of India, the estimated balance of Rs. 1,60,000 on the 31st March 1882 will be credited to Provincial.

#### EXPENDITURE.

80. *Interest.*—The original estimate of interest charges, as advised by the Accountant-General, Public Works Department, was Rs. 39,55,000. The reduction of the rate of interest from  $4\frac{1}{2}$  per cent. to 4 per cent. reduced this estimate to Rs. 35,16,000, which was adopted by this Government. The



Government of India have, on later information, increased these charges to Rs. 35,62,000. This estimate will accordingly be accepted.

81. *Refunds*—The original estimate of refunds of provincial revenues was Rs. 6,88,000. Under the new arrangement the refunds of receipts from Excise, Stamps, Assessed Taxes, and Registration, as well as Forests will be met in equal proportions by the Imperial and the Provincial Governments. The Provincial Government is also liable to pay for refunds of land revenue in the same proportion as it enjoys the receipts under this head. The estimate thus amounts to Rs. 6,20,000. The Government of India have added a sum of Rs. 2,000, which was omitted from the Accountant-General's first estimate submitted to this Government. The estimate of the Government of India will stand.

82. *Land Revenue*.—The original estimate of Land Revenue charges was Rs. 26,85,000. A sum of Rs. 1,17,000 was added on account of the improvement charges of Government estates in consequence of the abolition of the Estates' Improvement Fund. It has been settled in consultation with the Board of Revenue that the charges on account of education in Government estates should be under the control of the Education Department, and that the contribution to road works should be made over to District Road Committees. A sum of Rs. 82,000 has accordingly been deducted from the total estimate, Rs. 32,000 being added to "Education," and Rs. 50,000 to "Contribution to Local Funds." Under the new arrangement, the Provincial Government will have to bear the entire expenditure on account of *malikana*, which is estimated at Rs. 1,44,000 for 1882-83. The provincial share of the "settlement and survey" charges amounts to Rs. 90,000. A sum of Rs. 1,50,000, being half the grant for the improvement of the Subordinate Civil Service and the establishment of the Khoolna district, has also been added to the charges under Land Revenue. The total estimate, as adopted by this Government, stands thus at Rs. 31,04,000. The Government of India have omitted from this head Rs. 3,000 on account of the medical charges of Government estates, Rs. 24,000 for charges on account of miscellaneous public improvements, and Rs. 8,000 provided for loss on cesses to be borne by Government on account of these estates. The Government of India have only entered Rs. 1,30,000 instead of Rs. 1,50,000 on account of the improvement of the Subordinate Executive Service, the balance being added under Law and Justice. The estimate of the Government of India is thus Rs. 30,49,000. But it has been decided that all charges on account of the Government estates, except the contribution to education and road works should be under the control of the Board of Revenue and shown as management charges of Government estates. The estimate under this head will be altered to Rs. 30,84,000.

83. *Forests*—The Government of India have reduced the estimate under this head from Rs. 4,45,000 to Rs. 4,40,000. The provincial share amounts to Rs. 4,20,000.

84. The expenditure under the head of *Excise and Assessed Taxes* is equally divided between the Imperial and Provincial Governments.

85. *Customs*.—The original estimate of this Government was Rs. 7,05,000. The Government of India have reduced it to Rs. 5,69,000. The decrease in Customs charges is due to the proposed reduction in Customs establishment in consequence of the abolition of import duties. The exact amount of saving in the cost of these establishments has not yet been ascertained. The Government of India anticipate that the savings in 1882-83 may amount to Rs. 1,36,000, and ultimately to Rs. 2,64,000. As the Provincial percentage of Land Revenue has been calculated with reference to the full cost of establishment, the Government of India has taken credit for the anticipated savings in the form of a contribution from Provincial to Imperial. It is observed, however, that this gain will be considerably discounted in consequence of the gratuities and compensations to be immediately given, which under the new contract will be borne by this Government. A representation on this subject will be made to the Government of India.

86. *Stamps*.—The estimate amounts to Rs. 4,51,000 against Rs. 4,84,000, the regular estimate for the current year. The increase is under the head of Cost of Stamps supplied to Provincial Government. Half the expenditure under Stamps will be borne by the Imperial Government.

87. *Registration*.—The expenditure under this head amounted to Rs. 6,37,702 in 1880-81. For 1882-83 they are estimated at Rs. 6,33,000. This amount will be equally divided between the Imperial and Provincial Governments.

88. *Administration*.—The estimate for 1882-83 provides for an expenditure of Rs. 14,68,000 against Rs. 14,86,000, the regular estimate for the year 1881-82. The decrease is due to certain vacancies in the grades of assistants in the Bengal Secretariat being filled up by the appointment of officers on minimum pay, against a slight increase in consequence of the substitution of the appointment of Under-Secretary for that of Assistant Secretary.

89. *Minor Departments*.—The estimate under this head amounts to Rs. 3,06,000 against Rs. 3,03,000, the regular estimate for 1881-82. The increase appears under the head of "Cinchona plantation."

90. *Law and Justice*.—The original estimate under this head, as passed by the Local Government, was Rs. 89,24,000, viz., Rs. 69,33,000 for Law and Justice (proper), and Rs. 19,91,000 for Jails. Under the new financial arrangement the Local Government will have to bear the charges on account of law officers, for which a sum of Rs. 2,75,000 has been added to the estimate. A further sum of Rs. 1,50,000, being half the grant for the improvement of the Subordinate Civil Service and the establishment of the Khoolna district, has been included. The total estimate of the Local Government thus stands at Rs. 93,49,000. The Government of India have increased the grant under this head for the improvement of the Subordinate Civil Service by Rs. 20,000, by a corresponding reduction in the grant under Land Revenue. The total grant thus amounts to Rs. 93,69,000.

91. The original estimate under *Police* was Rs. 41,31,000. A sum of Rs. 4,50,000 has been added, in accordance with the terms of the Resolution of the 28th February last, to provide for the police charges within municipal limits outside Calcutta, Howrah, and the Suburbs. All municipalities (except Calcutta, Howrah, and the Suburbs) have been relieved of these charges, the savings thus accruing to their income being devoted to the maintenance of dispensaries and to miscellaneous public improvements. The grant under *Medical*, which was originally entered at Rs. 15,26,000, including the provision of Rs. 3,65,000 for Medical establishments has accordingly been reduced by one lakh of rupees. The estimate of the Government of India includes a provision of Rs. 3,000 for Medical charges in Government estates. As explained above, these charges will be shown under Land Revenue.

92. *Marine*.—The expenditure under this head amounted to Rs. 10,86,377 in 1880-81, and the regular estimate for 1881-82 amounts to Rs. 10,97,000 against the original estimate of Rs. 12,17,000. The estimate for 1882-83 is Rs. 8,26,000. The decrease is due to the transfer of the port approaches to the Port Commissioners and the amalgamation of the offices of Port Commissioner and the Shipping Master.

93. *Education*.—The actuals in 1880-81 were Rs. 25,55,778, and the grant for 1882-83 amounts to Rs. 29,60,000. A large provision has been made for Grants-in-aid and Assignments generally and under "Scholarships," and a sum of Rs. 32,000 has been added for primary education in Government estates. The primary grant has been increased by 1 lakh of rupees.

94. *Ecclesiastical*.—The cemetery charges, which up to the present have been provincial, averaged about Rs. 8,500 a year. They have been made Imperial under the new contract.

95. *Stationery and Printing*.—The Stationery Office, which has hitherto been an Imperial charge, has been made over to Provincial control. The estimate of Rs. 10,04,000 includes a provision of Rs. 93,000 on this account.

96. *Superannuation*.—In the new financial contract all pensions and gratuities (except pensions payable from the military and medical funds) brought to account in India, have been made Provincial, the local Government being responsible for the pensions and gratuities which it now pays, or hereafter grants or recommends, however earned and wherever paid. The estimate for 1882-83 amounts to Rs. 10,28,000. But this will be considerably increased by the gratuities and pensions to be immediately given in consequence of the reduction of custom establishments. The exact amounts of the increase is not yet known. The original estimate may, for the present, stand.

97. *Miscellaneous.*—Under this head the Government of India have retained as Imperial the charges on account of remittance of treasure; discount on supply bills; and extraordinary unclassified items exceeding Rs. 10,000. The expenditure in 1880-81 amounted to Rs. 3,72,007, and the estimate for 1882-83 is Rs. 2,92,000. In 1880-81 the miscellaneous and unforeseen charges aggregated Rs. 1,00,632. A sum of Rs. 23,000 only is estimated for the current year.

98. The grant made by this Government from Provincial funds for public works of all kinds was Rs. 1,27,48,000, and the amount was distributed as follows:—

	Rs.
Railways ... ..	35,70,000
Irrigation and Navigation ... ..	36,72,000
Other works by Civil Officers ... ..	48,000
Ditto by Public Works Department officers ... ..	54,58,000
Total ... ..	1,27,48,000

A sum of Rs. 23,000 has been added on account of public works in Imperial Museums, Educational buildings, and Light-houses, and Rs. 24,000 for miscellaneous public improvements in Government estates. The Government of India have otherwise increased the grant by Rs. 2,67,000. The estimate of the Government of India will stand.

99. *Contribution.*—A sum of Rs. 13,50,000, including the contribution for road works in Government estates, was set aside by this Government for grants-in-aid to district road and other incorporated local funds. The original estimate was Rs. 7,00,000 only, but the Lieutenant-Governor was enabled to increase the provision on learning, after the despatch of the budget, that large savings would be made in the public works grant for the past year. The Government of India accordingly entered Rs. 7,00,000 only; but they have since accorded sanction to the additional expenditure.

100. Two statements are appended to this Resolution, showing the actual receipts and disbursements—Imperial, Provincial and Local—for 1880-81, the regular estimate for 1881-82, and the estimates for 1882-83, as first estimated by this Government, as revised by the Financial Department of the Government of India, and as now finally accepted by the Lieutenant-Governor.

101. The total Provincial receipts for the year 1882-83 are estimated to amount to Rs. 4,01,56,000 and the estimated expenditure to Rs. 4,65,92,000 or Rs. 64,36,000 more than the receipts. The balance at credit of the Provincial Revenues on the 1st April 1882 will accordingly decrease by that amount, and will be reduced as shown in the statement to Rs. 8,13,000.

By order of the Lieutenant-Governor of Bengal,

COLMAN MACAULAY,

Secy. to the Govt. of Bengal.

## ESTIMATE OF

REVENUES AND RECEIPTS.	ACCOUNTS, 1880-81.				REGULAR ESTIMATE, 1881-82.				LOCAL GOVERN.	
	Imperial.	Provincial.	Local.	Total.	Imperial.	Provincial.	Local.	Total.	Imperial.	Provincial.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rd.	Rs.	Rs.
Opening balance		51,04,250	22,50,084			42,91,000	10,02,000			72,42,000
I.—Land Revenue	3,73,90,512		1,21,571	3,75,18,083	3,75,36,000		1,14,000	3,76,50,000	2,53,51,000	1,24,99,000
III.—Forest	5,61,340			5,61,340	6,28,000			6,28,000	3,55,000	3,55,000
IV.—Excise		85,52,782		85,52,782		95,00,000		95,00,000	50,52,000	50,53,000
V.—Assessed Taxes	18,03,001	3,50,000		10,53,001	13,00,000	3,50,000		10,50,000	8,00,000	8,00,000
VI.—Provincial Rates		35,15,287	37,18,545	72,33,832		35,50,000	36,00,000	71,50,000		35,78,000
VII.—Customs	96,71,750	1,29,834		92,01,620	84,40,000	80,000		85,20,000	88,24,000	85,000
VIII.—Salt	2,38,47,338	1,35,041		2,39,82,420	2,38,40,000	1,00,000		2,40,00,000	2,40,00,000	1,30,000
IX.—Opium	7,78,04,735			7,78,04,735	7,64,00,000			7,64,00,000	6,84,36,000	
X.—Stamps		1,13,91,037		1,13,91,037		1,20,00,000		1,20,00,000	59,00,000	59,00,000
XI.—Registration		10,29,602		10,29,602		10,00,000		10,00,000	5,05,000	5,08,000
XIII.—Post Office			2,321	2,321			8,000	8,000		
XV.—Minor Departments		1,94,934	24,737	2,59,671		1,91,000	80,000	2,81,000		1,91,000
XVI.—Law and Justice		17,59,289		17,59,289		17,10,000		17,10,000		17,10,000
XVII.—Police		4,86,130		4,86,130		5,20,000		5,20,000		5,40,000
XVIII.—Marine		12,75,687		12,75,687		11,00,000		11,00,000		8,23,000
XIX.—Education		4,87,791		4,87,791		5,30,000		5,30,000		5,14,000
XX.—Medical		1,58,136		1,58,136		1,38,000		1,38,000		1,42,000
XXI.—Stationery and Printing	2,401	1,22,071		1,24,532		1,22,000		1,22,000		1,12,000
XXII.—Interest	7,50,941	13,386		7,64,327	7,30,000	20,000		7,50,000	7,13,000	21,000
XXIII.—Superannuation	68,652			68,652	70,000			70,000		71,000
XXIV.—Miscellaneous	29,86,123	7,53,154	1,11,234	38,50,511	65,000	6,55,000	2,20,000	9,40,000	62,000	6,43,000
XXV.—Railways		29,56,903		29,56,903		32,19,000		32,19,000		36,30,000
XXVI.—Irrigation and Navigation		10,71,361	11,785	16,83,186		17,02,000	12,000	17,74,000		18,90,000
XXVII.—Other Public Works		6,96,296	2,896	6,99,192		6,90,000		6,90,000		7,02,000
XXX.—Gain by exchange	42,491			42,491	50,000			50,000	28,000	
Total	15,38,35,430	3,56,40,401	40,63,089	19,35,38,920	14,80,71,000	3,73,03,000	40,44,000	18,94,18,000	14,00,19,000	3,90,01,000
Contribution			1,94,692			2,000	3,33,000			
Imperial allotment		40,39,010				83,84,000				
Debt			57,741							
Balance of the Estates Improvement Fund										1,80,000
GRAND TOTAL		4,47,83,061	65,67,506			5,06,80,000	62,79,000			4,75,10,000



## RECEIPTS, 1882-83.

## BUDGET ESTIMATE, 1882-83.

MENT (ORIGINAL).		GOVERNMENT OF INDIA, DEPARTMENT OF FINANCE.				LOCAL GOVERNMENT (REVISED).			
Local.	Total.	Imperial.	Provincial.	Local.	Total.	Imperial.	Provincial.	Local.	Total.
Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
10,18,000	88,30,000	.....	70,88,000	18,13,000	80,01,000	.....	72,49,000	10,18,000	.....
.....	3,78,40,000	2,54,83,000	1,24,16,000	.....	3,78,40,000	2,53,51,000	1,24,08,000	.....	3,78,40,000
.....	7,10,000	3,50,000	3,50,000	.....	7,00,000	3,50,000	3,50,000	.....	7,00,000
.....	1,01,10,000	50,55,000	50,55,000	.....	1,01,10,000	50,55,000	50,55,000	.....	1,01,10,000
.....	16,00,000	8,00,000	8,00,000	.....	16,00,000	8,00,000	8,00,000	.....	16,00,000
36,81,000	72,59,000	.....	35,70,000	36,81,000	72,57,000	.....	35,78,000	36,81,000	72,59,000
.....	80,00,000	30,00,000	85,000	.....	30,85,000	30,00,000	85,000	.....	30,85,000
.....	2,41,39,000	1,79,69,000	1,39,000	.....	1,81,08,000	1,79,69,000	1,39,000	.....	1,81,08,000
.....	6,84,36,000	6,81,36,000	.....	.....	6,84,36,000	6,84,36,000	.....	.....	6,84,36,000
.....	1,18,00,000	50,00,000	50,00,000	.....	1,18,00,000	60,00,000	60,00,000	.....	1,20,00,000
.....	10,11,000	5,05,000	5,05,000	.....	10,11,000	5,05,000	5,05,000	.....	10,11,000
11,000	11,000	.....	.....	11,000	11,000	.....	.....	11,000	11,000
90,000	2,00,000	.....	1,02,000	90,000	2,01,000	.....	1,01,000	90,000	2,00,000
.....	17,10,000	.....	17,10,000	.....	17,10,000	.....	17,10,000	.....	17,10,000
.....	5,46,000	.....	5,46,000	.....	5,46,000	.....	5,46,000	.....	5,46,000
.....	8,23,000	.....	8,23,000	.....	8,23,000	.....	8,23,000	.....	8,23,000
.....	5,14,000	.....	5,14,000	.....	5,14,000	.....	5,14,000	.....	5,14,000
.....	1,42,000	.....	1,42,000	.....	1,42,000	.....	1,42,000	.....	1,42,000
.....	1,12,000	.....	1,12,000	.....	1,12,000	.....	1,12,000	.....	1,12,000
4,000	7,38,000	7,13,000	21,000	4,000	7,38,000	7,13,000	21,000	4,000	7,38,000
.....	71,000	.....	71,000	.....	71,000	.....	71,000	.....	71,000
1,38,000	8,33,000	62,000	6,33,000	1,38,000	8,33,000	52,000	6,43,000	1,38,000	8,33,000
.....	30,20,000	.....	31,02,000	.....	31,02,000	.....	30,20,000	.....	31,02,000
11,000	19,01,000	.....	18,90,000	11,000	19,01,000	.....	18,90,000	11,000	19,01,000
.....	7,02,000	.....	7,02,000	.....	7,02,000	.....	7,02,000	.....	7,02,000
.....	23,000	23,000	.....	.....	23,000	23,000	.....	.....	23,000
39,44,000	18,38,64,000	12,82,52,000	2,06,74,000	39,44,000	17,18,70,000	12,82,59,000	3,09,90,000	39,44,000	17,31,90,000
13,50,000	.....	.....	2,000	7,00,000	.....	.....	.....	13,50,000	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	1,00,000	.....	.....
66,12,000	.....	.....	4,07,64,000	64,57,000	.....	.....	4,74,05,000	69,12,000	.....

## ESTIMATE OF

DISBURSEMENTS.	ACCOUNTS, 1880-81.				REGULAR ESTIMATE, 1881-82.				LOCAL GOVERNMENT	
	Imperial.	Provincial.	Local.	Total.	Imperial.	Provincial.	Local.	Total.	Imperial.	Provincial.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1. Interest on Debt	.....	36,31,804	.....	36,31,804	.....	33,71,000	.....	33,71,000	.....	33,10,000
2. Interest on other accounts	1,88,710	.....	.....	1,88,710	1,75,000	.....	.....	1,75,000	1,72,000	.....
3. Refunds	4,66,278	7,38,748	38,848	12,43,874	4,30,000	7,80,000	11,000	11,91,000	5,91,000	6,30,000
4. Land Revenue	4,96,320	27,30,228	.....	32,26,548	4,23,000	27,00,000	.....	31,23,000	1,39,000	31,04,000
5. Forest	3,35,359	.....	.....	3,35,359	3,96,000	.....	.....	3,96,000	2,22,500	2,22,500
6. Excise	.....	2,61,913	.....	2,61,913	.....	2,70,000	.....	2,70,000	1,35,000	1,35,000
7. Assessed Taxes	.....	1,68,399	.....	1,68,399	.....	1,00,000	.....	1,00,000	50,000	50,000
8. Provincial Rates	.....	310	1,77,898	1,78,208	.....	.....	1,81,000	1,81,000	.....	.....
9. Customs	.....	6,98,634	.....	6,98,634	.....	6,95,000	.....	6,95,000	.....	7,05,000
10. Salt	41,333	17,781	.....	59,114	31,000	32,000	.....	63,000	33,000	20,000
11. Opium	2,02,64,008	1,033	.....	2,02,65,041	2,05,89,000	.....	.....	2,05,89,000	2,26,10,000	.....
12. Stamps	.....	3,98,672	.....	3,98,672	.....	4,34,000	.....	4,34,000	2,25,500	2,25,500
13. Registration	.....	6,37,702	.....	6,37,702	.....	6,09,000	.....	6,09,000	3,17,000	3,16,000
14. Post Office	.....	.....	2,93,603	2,93,603	.....	.....	3,05,000	3,05,000	.....	.....
15. Administration	2,63,021	14,70,321	97,544	18,30,886	2,67,000	14,96,000	1,01,000	18,64,000	3,67,000	14,68,000
16. Minor Departments	80,131	2,75,215	53,012	4,08,358	4,72,000	3,00,000	53,000	8,25,000	31,000	3,08,000
17. Law and Justice	2,55,657	83,75,588	.....	86,31,245	2,60,000	84,28,000	.....	86,88,000	.....	93,40,000
18. Police	.....	40,17,627	.....	40,17,627	.....	41,32,000	.....	41,32,000	.....	45,81,000
19. Marine	.....	10,86,377	.....	10,86,377	.....	10,97,000	.....	10,97,000	.....	8,28,000
20. Education	.....	25,55,778	12,903	25,68,681	.....	26,77,000	20,000	26,97,000	.....	29,80,000
21. Ecclesiastical	1,83,454	8,339	.....	1,91,793	1,93,000	8,000	.....	2,01,000	2,02,000	.....
22. Medical	8,52,407	11,10,035	16,534	14,79,036	3,58,000	10,93,000	14,000	14,65,000	.....	14,26,000
23. Stationery and Printing	13,86,535	9,46,209	18,591	23,51,415	13,80,000	9,37,000	18,000	23,35,000	2,65,000	10,04,000
24. Political	30,275	.....	.....	30,275	17,000	.....	.....	17,000	30,000	.....
25. Allowances	11,19,569	.....	.....	11,19,569	11,27,000	.....	.....	11,27,000	11,41,000	.....
26. Leave Allowance	30,896	.....	.....	30,896	25,000	.....	.....	25,000	25,000	.....
27. Superannuation	11,01,169	2,069	83	11,03,271	9,45,000	5,000	.....	9,50,000	.....	10,23,000
28. Miscellaneous	47,784	3,72,007	16,340	4,36,177	63,000	3,15,000	26,000	4,04,000	45,000	2,92,000
29. Railways	.....	18,98,315	.....	18,98,315	.....	32,16,000	.....	32,16,000	.....	39,70,000
30. Irrigation	.....	24,34,210	1,903	24,36,113	.....	37,51,000	2,800	37,63,000	.....	36,72,000
31. Other Public Works	.....	47,59,644	38,05,976	85,65,620	.....	66,92,000	39,29,000	1,06,20,000	.....	53,29,000
32. Loss by exchange	769	.....	.....	769	.....	.....	.....	.....	.....	.....
Total	2,66,74,565	3,95,96,468	45,33,291	6,98,02,334	2,71,51,000	4,30,98,000	46,59,000	7,49,08,000	2,64,11,000	4,40,27,000
Contribution to Government of India	.....	10,00,000	.....	.....	.....	.....	.....	.....	.....	.....
Other contribution	.....	1,96,082	.....	.....	.....	3,35,000	2,000	.....	.....	13,50,000
Debt	.....	.....	1,82,004	.....	.....	.....	.....	.....	.....	.....
Balance of Estates Improvement Fund	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Closing balance	.....	49,91,111	19,01,911	.....	.....	72,49,000	16,18,000	.....	.....	10,33,000
GRAND TOTAL	.....	4,47,63,661	65,67,896	.....	.....	5,06,90,000	62,79,000	.....	.....	4,78,10,000
PROVINCIAL SURPLUS (+) OR DEFICIT (-)	.....	-1,13,189	-3,44,073	.....	.....	+20,53,000	-2,54,000	.....	.....	-22,16,000

## EXPENDITURE, 1882-83.

## BUDGET ESTIMATE, 1882-83.

MENT (ORIGINAL).		GOVERNMENT OF INDIA, DEPARTMENT OF FINANCE.				LOCAL GOVERNMENT (REVISED).			
Local.	Total.	Imperial.	Provincial.	Local.	Total.	Imperial.	Provincial.	Local.	Total.
Rs.	Rs.	Rp.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
.....	35,16,000	.....	35,62,000	.....	35,62,000	.....	35,62,000	.....	35,62,000
.....	1,72,000	1,72,000	.....	.....	1,72,000	1,72,000	.....	.....	1,72,000
11,000	11,22,000	2,50,000	6,22,000	11,000	9,83,000	3,60,000	6,22,000	11,000	9,83,000
.....	33,43,000	1,89,000	30,40,000	.....	32,38,000	1,89,000	30,84,000	.....	32,73,000
.....	4,40,000	2,20,000	2,20,000	.....	4,40,000	2,20,000	2,20,000	.....	4,40,000
.....	2,70,000	1,35,000	1,35,000	.....	2,70,000	1,35,000	1,35,000	.....	2,70,000
.....	1,00,000	50,000	50,000	.....	1,00,000	50,000	50,000	.....	1,00,000
1,73,000	1,73,000	.....	6,000	1,73,000	1,79,000	.....	.....	1,73,000	1,73,000
.....	7,05,000	—2,000	5,69,000	.....	5,67,000	—2,000	5,69,000	.....	5,67,000
.....	53,000	33,000	20,000	.....	53,000	33,000	20,000	.....	53,000
.....	2,28,10,000	2,24,80,000	.....	.....	2,24,60,000	2,24,80,000	.....	.....	2,24,60,000
.....	4,51,000	2,26,000	2,25,000	.....	4,51,000	2,26,000	2,25,000	.....	4,51,000
.....	6,33,000	3,16,000	3,17,000	.....	6,33,000	3,16,000	3,16,000	.....	6,33,000
3,28,000	3,28,000	.....	.....	3,18,000	3,18,000	.....	.....	3,28,000	3,18,000
1,07,000	16,42,000	2,67,000	14,68,000	1,07,000	18,42,000	2,67,000	14,68,000	1,07,000	18,42,000
56,000	8,93,000	0,000	3,06,000	56,000	3,68,000	6,000	3,06,000	56,000	3,68,000
.....	93,49,000	.....	93,69,000	.....	93,69,000	.....	93,69,000	.....	93,69,000
.....	45,81,000	.....	45,81,000	.....	45,81,000	.....	45,81,000	.....	45,81,000
.....	8,28,000	.....	8,28,000	.....	8,28,000	.....	8,28,000	.....	8,28,000
.....	29,60,000	.....	29,60,000	.....	29,60,000	.....	29,60,000	.....	29,60,000
.....	2,02,000	2,02,000	.....	.....	2,02,000	2,02,000	.....	.....	2,02,000
12,000	14,38,000	.....	14,29,000	12,000	14,41,000	.....	14,29,000	12,000	14,38,000
18,000	12,87,000	2,65,000	10,04,000	18,000	12,87,000	2,65,000	10,04,000	18,000	12,87,000
.....	30,000	30,000	.....	.....	30,000	30,000	.....	.....	30,000
.....	11,41,000	11,41,000	.....	.....	11,41,000	11,41,000	.....	.....	11,41,000
.....	25,000	25,000	.....	.....	25,000	25,000	.....	.....	25,000
.....	10,28,000	.....	10,28,000	.....	10,28,000	.....	10,28,000	.....	10,28,000
22,000	3,50,000	45,000	2,92,000	22,000	3,50,000	45,000	2,92,000	22,000	3,50,000
.....	35,70,000	.....	35,71,000	.....	35,71,000	.....	35,70,000	.....	35,70,000
.....	36,72,000	.....	36,72,000	.....	36,74,000	.....	36,72,000	.....	36,72,000
45,72,000	1,01,01,000	.....	57,22,000	45,78,000	1,04,77,000	.....	57,99,000	45,72,000	1,04,77,000
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
52,99,000	7,64,37,000	2,61,50,000	4,80,82,000	53,97,000	7,66,39,000	2,61,50,000	4,51,00,000	52,99,000	7,65,55,000
.....	.....	.....	1,36,000	.....	.....	.....	1,36,000	.....	.....
.....	.....	.....	7,00,000	.....	.....	.....	13,50,000	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1,60,000	.....	.....	.....	.....	.....	.....	.....	1,60,000	.....
14,58,000	.....	.....	8,46,000	10,68,000	.....	.....	8,13,000	14,53,000	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
69,12,000	.....	.....	4,67,64,000	64,57,000	.....	.....	4,74,96,000	69,12,000	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
—1,65,000	.....	.....	—62,46,000	—7,45,000	.....	.....	—64,36,000	—1,65,000	.....

TRAINING, SELECTION, AND QUALIFICATION OF OFFICERS  
FOR CHARGE OF DISTRICT TREASURIES.

APPOINTMENT DEPARTMENT.

*Dated Calcutta, the 28th March 1882.*

RESOLUTION.

READ—

A Resolution of the Government of India in the Department of Finance and Commerce, No. 355, dated the 18th January 1882, on the question of the administration of district and sub divisional treasuries in India, and on the system for their management and inspection.

Read also—

The Notification of this Government, dated the 18th November 1879, containing the rules for the regulation of the departmental examinations of Assistant Magistrates, Deputy Magistrates and other officers.

The Resolution of the Government of India, mentioned in the preamble, was published in the *Calcutta Gazette* of the 25th January 1882. Paragraphs 5 to 7 of that Resolution contain orders regarding the training, selection and qualification of officers who are to be placed in charge of treasuries. With a view to giving early effect to those orders, the Lieutenant-Governor directs—

- (I) that no Covenanted Civil Servant (including Military and Uncovenanted Officers in the Commissions of the Non-Regulation Provinces) shall in future be placed in charge of a district treasury except for the purposes of training as provided hereinafter, or as a strictly temporary measure pending the arrival of a duly qualified Deputy Collector appointed to the post;
- (II) that the charge of district treasuries shall be entrusted to Uncovenanted Deputy Collectors selected from among the whole body of Deputy Collectors on account of their special acquaintance with, or aptitude for, accounts. These officers shall, as regards promotion, be on precisely the same footing as officers employed on general or magisterial duties;
- (III) that no officer shall be placed in charge of a district treasury who has not passed the departmental examination by the higher standard, and who has not been employed as a Deputy Collector for at least three years.

2. An officer who has once elected or been appointed to this department of the public service shall remain in it for three years; he will be liable to be sent from one district to another, but such transfers will be made as seldom as possible.

3. Treasury officers may have such magisterial, revenue, or municipal duties made over to them as the District Officer may consider to be compatible with the efficient performance of the primary duty of treasury administration.

4. It is the duty of Commissioners and District Officers to see that young officers, until they have passed the higher departmental examination, are allowed opportunities of gaining practical acquaintance with the duties of a treasury officer, and that they are placed for the purposes of training in charge of district treasuries under the general supervision of the Deputy Collector ordinarily in charge, or of some other competent officer on the spot, for a period of not less than six weeks, or more than two months, in each year. A certificate from the Collector of the district that each officer in training has, under these provisions, duly attended to, and satisfactorily discharged, the duties of treasury officer, shall be indispensable to his being declared to have passed any departmental examination. The Collector will see that this certificate is forwarded to the Central Examination Committee at each departmental examination.

5. The Lieutenant-Governor desires that Commissioners of Divisions will at once proceed to select properly qualified treasury officers in the several districts of their divisions, and that they will report to Government in the Appointment Department the names of the officers thus selected.



6. Assistant Magistrates and Deputy Collectors are at present liable, under the notification of the 18th November 1879, to examination with the aid of books in the circular orders of the Comptroller-General, the Accountant-General, and the Board of Revenue. In order, however, to ensure a better acquaintance with the system of treasury and revenue accounts, the Government of India have now directed that examination in treasury and local fund accounts, and in departmental revenue accounts, shall form a part of the test obligatory on all Assistant and Deputy Collectors at the departmental examinations according to both the lower and higher standards. The Government of India observe that the scope of the questions at the former will necessarily be somewhat elementary, but candidates at the latter should be required to exhibit a satisfactory general acquaintance with the whole system of accounts prevailing in the province in which they are employed.

7. In compliance with these orders, the Lieutenant-Governor directs that in future separate papers on treasury and local fund accounts shall be set by the Accountant-General in communication with the Central Examination Committee, and that these papers shall form part of the examination under each standard with the aid of books. These orders will not take effect until the examination which is to be held in October 1882. Officers who fail to pass fully in compulsory subjects by the higher standard at the next examination in May will be liable to examination in the papers on accounts at all subsequent examinations.

ORDER.—Ordered that a copy of this Resolution be communicated to all Commissioners of Divisions, District Officers, Accountant-General, Board of Revenue, and Central Examination Committee, for information.

By order of the Lieutenant-Governor of Bengal,

HORACE A. COCKERELL,

*Secretary to the Government of Bengal.*

## LIBERALITY OF SYED AMEER HOSSEIN.

No. 249, dated Calcutta, the 18th April 1882.

From—C. S. BAYLEY, Esq., Offg. Under-Secretary to the Government of Bengal,  
To—The Director of Public Instruction.

I AM directed to acknowledge the receipt of your letter No. 2277, dated the 12th instant, with enclosure, in which you report the offer of Syed Ameer Hossein, Deputy Magistrate of the 24-Pergunnahs, to found a scholarship of the monthly value of Rs. 20, tenable for two years, at the Government Engineering College, Seebpore, by a Mahomedan boy, being a native of Bengal or Behar, who, after passing the Entrance examination, may be selected to hold it by the Director of Public Instruction.

2 In accepting the offer, the Lieutenant-Governor desires that an expression of his cordial thanks may be conveyed to Syed Ameer Hossein for this act of liberality, and of his high appreciation of the public spirit which he has displayed and of the motives by which he has been actuated in the bestowal of his gift.

Sir Ashley Eden has much pleasure in acceding to the wish expressed by Syed Ameer Hossein that the scholarship should be known as the "Eden" Scholarship.

3. The correspondence on the subject will be published in the next issue of the *Calcutta Gazette*.

No. 2277, dated Calcutta, the 12th April 1882.

From—A. CROFT, Esq., Director of Public Instruction, Bengal,  
To—The Secretary to the Government of Bengal, General Department.

I HAVE the honour to submit copy of a letter from Syed Ameer Hossein, Deputy Magistrate of the 24-Pergunnahs, in which he proposes to found a scholarship of Rs. 20 a month for the purpose of enabling a Mahomedan boy to read in the Engineering Department of the Seebpore College, and encloses a cheque for Rs. 500 in payment of the cost of the first scholarship.

2. I have the honour to recommend that the Syed's beneficent offer be accepted, and that the correspondence be published in the *Calcutta Gazette*.

Dated Alipore, the 10th April 1882.

From—SYED AMEER HOSSEIN, Deputy Magistrate and Collector, Alipore,  
To—The Director of Public Instruction.

I SHALL feel highly obliged to you if you will forward this to His Honor the Lieutenant-Governor of Bengal for his favourable consideration.

2. As a humble tribute of gratitude to His Honor Sir Ashley Eden for the kindness he has always shown to me, and for the interest he has invariably taken in the cause of Mahomedan education, I propose to found a scholarship of Rs. 20 a month in his honour on the eve of his departure from this country.

The scholarship should be called the "Eden Scholarship," and should be tenable for two years at the Seebpore Engineering College by a Mahomedan of Bengal or Behar, who has passed the Entrance examination, and who may be selected by the Director of Public Instruction.

3. I enclose a cheque for Rs. 500 payable to you. Rs. 480 should be paid to the selected student at the rate of Rs. 20 a month, and remaining Rs. 20 should be given to him as a donation to meet the price of books on his entering the College. I shall continue to pay the sum of Rs. 500 every two years during my lifetime, or until I may be in a position to make a permanent endowment.

4. I respectfully trust that His Honor will be graciously pleased to accept this humble offer of mine.

## Rainfall, Weather, and State and Prospects of the Crops.

Statement showing Rainfall, Weather, and State and Prospects of the Crops in the different Districts of Bengal, as reported to Government during the week ending the 15th April 1882.

No.	District, and date of return.	Rainfall at Sudder Station in inches.	Character of the weather, state and prospects of the crops, and state of health at date.
<b>BENGAL.</b>			
<b>Western Districts.</b>			
1	Hurdwan, .....	.....	Report not received.
2	Bansoura, April 15 '82	Nil	Weather—cool mornings, hot days, and cloudy evenings. There was slight rain in different parts of the district, but it did no material good to the standing crops. Sugarcane grafts are being transplanted in Kotulpore. More rain is wanted. Public health good.
3	Beerbhoom, „ 15 „	Nil	Weather—cloudy. Some rain fell at Rampore Haut, and ploughing has begun. Cholera and cattle disease prevalent.
4	Mianapore, „ 15 „	0.40	Weather—hot. Cloudy in the latter part of the day. Scarcely any crop in the field except <i>boro</i> rice in the Ghatal sub-division, which is doing well. Public health good.
5	Hooghly, „ 15 „	0.52	Weather—seasonable. State and prospects of crops good. A good many cases of cattle disease in thanas Singoor and Paudoon.
	Howrah, „ 17 „	0.50	Weather—hot generally; storm appears to be gathering. <i>Boro</i> paddy doing well. Rice still cheap. General health good.
	Monesheekha „	0.08	
<b>Central Districts.</b>			
6	24-Pergunnahs, April 17 '82	0.16	Weather—seasonable; occasionally cloudy. No crops on the land. Ploughing continues. Public health generally good. Cholera reported from the Baraset sub-division.
7	Nuddea, „ 15 „	.....	Weather—cloudy and hot, though cool for the time of year. Sowing of <i>aus</i> still going on. Rain still wanted in some parts of the district. Fever slightly better in some places, but stationary in others. Cholera worse in one or two places.
	Kooshtga, „	0.78	
	Meherpore „	0.50	
	Choodanga „	0.98	
	Ramghat „	0.35	
8	Jessore, „ 15 „	0.9	Weather—close and sultry, though the nights and early mornings are still cool. <i>Boro</i> paddy is being reaped. The area sown with <i>boro</i> paddy is smaller than usual. Sowings for the rice crop are actively progressing. Prospects of indigo continue good. Public health improved, but an outbreak of cholera is reported from the Narail sub division.
	Jhenida „	1.15	
	Magoora „	1.4	
	Narail „	0.54	
	Khulna „	0.35	
	Bagirhat „	0.9	
9	Moorshedabad, „ 15 „	Nil	Weather—very warm. Harvest of winter crops is an average one. Rain is now much wanted for ploughing and sowing. Cholera has not yet totally disappeared from Jungypore. It is also somewhat bad at Ran-tollah in thana Bhugwangola.
10	Dinagopore, April 14 '82	0.09	Weather—seasonable. <i>Bhadoi</i> sowings progressing. Mango crop will be almost a complete failure. Price of rice from 22 to 30 seers per rupee.
11	Rajshahye, „ 15 „	Nil	Want of rain most severely felt. <i>Amun</i> paddy being sown broadcast in low lands. Sowing of other paddy and crops stopped for want of rain. Rice gradually rising in price; now 26 seers per rupee. Cholera and fever still reported in several places.
12	Rungpore, „ 14 „	1.43	Weather—seasonable. Standing crops are in good condition. Public health generally good, excepting in thana Uleepore where cholera has again broken out.
13	Bogra, „ 15 „	0.13	Weather—seasonable. Slight rain at the beginning of the week. Lands are nearly ready for <i>aus</i> . Standing crops promise well, but more rain wanted. Health good.
14	Pubna, „ 15 „	Nil	Weather—hot and dry. No rain. Rain wanted for rice and jute sowings. Public health satisfactory, but there have been a few cases of cholera but.
15	Darjeeling „ 15 „	1.02	Weather—clearer. Tea gardens rather backward for the season in the Terai. Crops in the hills doing well. Cholera has not increased.
16	Jamjoree, „ 15 „	Nil	Weather—cool at the beginning of the week, but since that time very warm. Crops are generally promising. Land is being prepared for <i>bhadoi</i> paddy.
	Cooch Behar, „ 14 „	1.50	Weather—warm. Prospects of <i>cheena</i> , <i>kaon</i> and <i>bitri</i> rice are favourable. Rice sells at Rs. 2 per maund. Cholera is still very severe in the Dinhatia sub-division.
	Dinhatia „	0.44	
	Mathabhanga „	0.29	
	Meckligunge „	0.25	
<b>Eastern Districts.</b>			
17	Dacca, April 15 '82	2.23	Weather—the heat on several days since the rain ceased has been very oppressive. Sowing of <i>aus</i> rice and jute, and planting of sugarcane going on. Land moist. Safflower, brinjal, and water-melon harvested; outturn not reported. <i>Cheena</i> an 8-anna crop in Manick gunge. <i>Boro</i> paddy being harvested.
	Manickgunge (for week ending 12th April)	2.44	
	Moonshigunge (for week ending 12th April)	1.08	
18	Farrukpore, „ 15 „	.....	Weather—seasonable; getting very hot. Scarcely any crop on the ground, but paddy on the churs coming up very well.
	Mudariopore „	0.45	
19	Duckergunge, „ 13 „	0.74	Weather—a short but sharp squall on the afternoon of 9th, hot during the rest of the week. In agricultural operations there is little doing. Public health still bad. Fifty deaths from cholera reported from the Sudder thana during the week, and 98 from Gulsakhali. There have been some fatal cases of diphtheria in Barrisul.
20	Mymensingh, „ 14 „	0.95	Weather—hot and sultry. Storm with hail on 8th. Prospects of crops good.

No.	District, and date of return.	Rainfall at Sudder Station in inches.	Character of the weather, state and prospects of the crops, and state of health at date.
<b>BEHAR.—contd.</b>			
<i>Eastern Districts—contd</i>			
<b>CHITTAGONG DIV.</b>	21 Chittagong April 18 '82	Nil	Weather—variable, with hot days and cool nights. Transplanting of <i>aus</i> crop commenced in some places. Mango crop is a failure. Prices steady. Small-pox and cholera still continue. General health fair.
	22 Noakholly. " 18 "	2.58	Weather—cloudy and hot with occasional rain. High southerly wind up to the 11th. <i>Moong</i> and <i>chillies</i> being harvested. <i>Aus</i> paddy being sown in some places. Young plants of <i>aus</i> paddy look well.
	23 Tipperah, " 14 "	3.63	Weather—stormy. Prospects of crops good; they have been much improved by the rain.
	Brahmunbaria " " "	2.37	
	Chandpore " " "	2.15	
<b>CHITTAGONG DIV.</b>	24 Chittagong Hill Tracts, April 12 '82	...	Report not received.
	Hill Tipperah, April 12 '82	3.59	Weather—sultry. Land being prepared for sowing <i>aus</i> paddy and for planting sugarcane. No important crops in the field. Public health good.
<b>BEHAR</b>			
<b>PATNA DIV.</b>	25 Patna, April 15 '82	Nil	Weather—hot. <i>Rubbee</i> outturn below the average. A few cases of small-pox reported from the Behar and Selloo police stations. Cholera reported from Futwah.
	26 Gya, " 15 "	Slight rain on the 9th.	Weather—hot during the day, sometimes cloudy. Maximum reading of thermometer in shade 104°. Harvesting of <i>rubbee</i> nearly finished; outturn below the average. A few cases of fever and small-pox reported in the interior.
	27 Suckabad, " 15 "	Nil	Weather—hot and calm. Outturn of <i>rubbee</i> below the average.
	28 Durbhanga, " 15 "	Nil	Weather—cool in the morning and hot during the day. Outturn of <i>rubbee</i> not very good. A little cholera in the south and east. Prices rising slightly.
	29 Mozufferpore " 15 '82	Nil	Weather—hot, sometimes cloudy. Standing crops continue to look well. Rain wanted chiefly in northern part of the district. Public health good.
	30 Saran " 15 "	Nil	Weather—hot during the day with steady west winds, still cool at nights. Threshing of <i>rubbee</i> crops still going on. <i>Cheena</i> and early rice being sown. Indigo looking well. General health good.
<b>CHITTAGONG DIV.</b>	31 Champaran, " 15 "	Nil	Weather—hot in the day, cool in the night. <i>Rubbee</i> crops are being threshed. Indigo coming on well. Opium weighments in progress. Public health good.
	32 Monghyr, April 15 '82	Nil	Weather—seasonable. <i>Rubbee</i> harvest nearly completed; average outturn expected.
	33 Bhagulpore, " 15 "	Slight rain on 9th.	Weather—hot. Easterly wind during first part of week; latterly westerly wind. Rain wanted to facilitate preparation of land for paddy sowings. Price of rice has risen. Cholera very prevalent, and has assumed an epidemic form in Behipore and Kissengunge.
	34 Purneah, " 15 "	0.14	Weather—fine. Wheat harvest being finished. Prospects fair. Cholera prevailing.
	Arrareah " " "	0.19	
	35 Maldah " 15 "	Nil	Weather—rather less hot than during the previous week. No west wind. Rain much wanted now for cultivation and sowing of <i>khadoi</i> paddy. Prices of food-grains have risen a little. Common rice is selling at from 23 to 25 seers per rupee. General health fair.
<b>CHITTAGONG DIV.</b>	36 Sonthal Pargah, " 15 "	Nil	Weather—hot, tempered by passing clouds. <i>Cheena</i> being sown in Godda and late <i>arhar</i> being harvested there. The <i>mohua</i> crop is poor; the crop is a very important one in this district, being used locally as an article of food both for man and cattle, and exported in large quantities for the manufacture of country spirits.
	Deoghur " " "	A few drops.	
<b>ORISSA.</b>			
<b>ORISSA DIV.</b>	37 Cuttack, April 14 '82	0.05	Weather—cloudy and hot. <i>Dalua</i> rice is still being reaped. Rain very much wanted for cotton, as well as for carrying on cultivation. Common rice sells at from 25 to 32 seers per rupee. Sporadic cases of cholera in some parts of the district.
	38 Pooree, " 13 "	0.11	Weather—hot. Land is still being tilled for <i>sarad</i> crop. <i>Dalua</i> rice is being harvested. Miscellaneous crops are promising. Common rice sells at from 30 to 38 Calcutta seers per rupee. Cattle-disease still reported. Cholera prevails in the district.
	39 Balasore, " 14 "	2.50	Several showers and one very heavy storm. Temperature has been greatly reduced. Ryots have taken advantage of the rain to plough. There is still cholera in many parts, but, owing probably to the rain, it has greatly decreased.
<b>CHOTA NAGPORE.</b>			
<i>South-West Frontier Agency.</i>			
<b>CHOTA NAGPORE.</b>	40 Hazaribagh, April 14 '82	0.20	Weather—hot, with occasional clouds. No crops on the ground. Prices of food-grains have slightly risen. Some isolated cases of small-pox reported from the interior.
	41 Lohardugga, " 15 "	0.13	Weather—seasonable. A storm with light rain on the 12th. More rain wanted for ploughing. No crops on the ground. Prices show a tendency to fall. Public health fair.
	42 Singbhoom, " 14 "	0.06	Weather—unsettled. Stormy and much cooler. The mango crop has entirely failed. <i>Mohua</i> has given only a 4-anna crop over the greater part of the district. Rain is much needed for ploughing operations.
	43 Manbhoom, " 15 "	0.25	Weather—one or two days cloudy, with wind and a little rain; otherwise hot as usual, with westerly wind. Cultivation of sugarcane has commenced. The outturn of <i>mohua</i> is reported to be generally short. Cholera and small-pox still reported from various parts of the district. Cattle-disease reported from one or two stations.

Published for general information.

CALCUTTA, STATISTICAL DEPT.,

The 18th April 1882.

COLMAN MACAULAY,

Offg. Secy. to the Govt. of Bengal.



## STATEMENT SHOWING THE STOCKS OF RICE IN AND AROUND CALCUTTA.

STOCKS IN HAND AS COMPILED ON—

NAMES OF MARKS.	1st week of April 1881.	1st week of May 1881.	1st week of June 1881.	1st week of July 1881.	1st week of Aug. 1881.	1st week of Sept. 1881.	2nd week of Oct. 1881.	1st week of Nov. 1881.	1st week of Dec. 1881.	1st week of Jan. 1882.	4th week of Feb. 1882.	1st week of Mar. 1882.	1st week of April 1882.
Balinghata ... ..	Mds. 3,90,000	Mds. 3,78,000	Mds. 4,13,000	Mds. 3,19,300	Mds. 3,19,300	Mds. 2,83,600	Mds. 3,10,000	Mds. 2,48,000	Mds. 2,01,000	Mds. 2,92,000	Mds. 4,78,500	Mds. 5,66,000	Mds. 6,54,000
Ootladanga ... ..	71,900	69,700	67,800	61,200	61,200	59,200	47,300	41,400	41,900	43,200	41,900	72,500	73,100
Chitpore, Golabree, Coomer- loop, Hathola, and Guip- Ghat.	6,98,000	6,67,300	6,40,700	6,29,800	6,29,800	6,29,400	5,85,400	7,45,300	7,58,000	7,59,300	6,19,700	6,53,100	7,62,900
Patherichatta, Posta, and Jorabagan.	37,500	37,000	35,000	29,500	29,500	24,000	29,000	35,700	24,000	25,700	24,500	24,500	22,600
Tollygunge, Chitlah, Kidderpore, and Moonshigunge.	1,26,800	1,20,500	1,18,400	1,12,300	1,52,000	1,52,900	1,23,900	93,400	83,300	96,000	1,46,250	1,86,000	1,44,900
31 Minor Bazars (estimated) ...	2,40,000	2,40,000	2,44,000	2,40,000	2,40,000	2,40,000	2,40,000	2,40,000	2,40,000	2,40,000	2,40,000	2,40,000	2,40,000
Other retail shops, 3,129 in number (estimated).	2,50,000	2,50,000	2,50,000	2,50,000	2,50,000	2,50,000	2,50,000	2,50,000	2,50,000	2,50,000	2,50,000	2,50,000	2,50,000
Baidyabatty, Nowabgunge, Bhuddesur, and Chander- nagore.	64,200	50,453	32,119	88,100	88,100	68,400	65,158	42,708	20,531	39,355	15,919	9,608	2,150
Total ...	18,75,900	18,53,453	17,99,019	17,07,500	17,09,900	17,07,500	16,50,756	16,98,500	16,16,781	17,85,355	18,19,769	20,31,463	21,73,100
On Railway premises on both sides of the river.	4,612 (on 4th April 81.)	3,342 (on 4th May 81.)	780 (on 3rd June 81.)	1,490 (on 5th June 81.)	..... (on 1st July 81.)	1,374 (on 3rd Sept. 81.)	9,858 (on 15th Oct. 81.)	800 (on 5th Nov. 81.)	6,218 (on 8th Dec. 81.)	7,432 (on 3rd Jan. 82.)	6,176 (on 3rd Feb. 82.)	7,146 (on 3rd Mar. 82.)	4,446 (on 4th April 82.)
By Port Com- missioners' re- turns.	43,887 (1st to 3rd April 81.)	49,115 (1st to 3rd May 81.)	49,383 (1st to 3rd June 81.)	49,383 (3rd to 5th July 81.)	48,746 (1st to 3rd Aug. 81.)	47,435 (1st to 3rd Sept. 81.)	37,198 (13th to 15th Oct. 81.)	18,398 (4th to 6th Nov. 81.)	28,143 (1st to 3rd Dec. 81.)	11,348 (1st to 3rd Jan. 82.)	38,385 (1st to 3rd Feb. 82.)	45,938 (1st to 3rd Mar. 82.)	31,000 (2nd to 4th April 82.)
By Canal returns	62,534 (1st to 3rd April 81.)	59,597 (1st to 3rd May 81.)	53,163 (1st to 3rd June 81.)	48,320 (3rd to 5th July 81.)	53,846 (1st to 3rd Aug. 81.)	60,478 (1st to 3rd Sept. 81.)	40,051 (13th to 15th Oct. 81.)	55,524 (4th to 6th Nov. 81.)	28,084 (1st to 3rd Dec. 81.)	1,13,408 (1st to 3rd Jan. 82.)	1,08,981 (1st to 3rd Feb. 82.)	1,37,895 (1st to 3rd Mar. 82.)	48,377 (2nd to 4th April 82.)
Grand Total of Stocks ...	19,92,933	19,16,477	18,71,245	18,06,530	18,09,829	18,06,777	17,39,843	17,49,019	16,78,225	19,49,057	20,51,801	22,22,506	22,06,081
Probable stocks available for exportation by sea.	94 lakhs.	84 lakhs.	84 lakhs.	74 lakhs.	8 lakhs.	74 lakhs.	7 lakhs.	7 lakhs.	64 lakhs.	9 lakhs.	10 lakhs.	114 lakhs.	13 lakhs.

STATISTICAL DEPARTMENT,  
The 12th April 1882.

COLMAN MACAULAY,  
Offg. Secy. to the Govt. of Bengal.

## Results of the Meteorological Observations taken at the Alipore Observatory from 9th to 15th April 1882.

Month.	Date.	Maximum in sun.	Mean pressure barometer at 39° Fahr.	TEMPERATURE.				HYGROMETRY.				WIND.		Rain.	WEATHER.
				Mean.	Maximum.	Range.	Minimum.	Mean wet bulb.	Vapour tension.	Dew point.	Humidity.	Prevailing direction.	Miles recorded.		
1882.		☉	Inches.	☉	☉	☉	☉	☉	Inches.	☉	%			Inches.	
April	9th	151.7	29.776	82.8	93.7	10.9	75.2	77.7	0.894	75.5	79	SSW	192	Nil	Cloudy.
"	10th	151.9	755	81.0	95.8	20.8	75.0	75.7	810	73.2	77	SSW and variable	201	0.14	Cloudy, o, g, t, <, /, p.
"	11th	150.6	760	81.5	96.5	20.8	69.7	73.7	725	69.6	67	S by W and variable	193	Nil	Cloudy, lr.
"	12th	160.7	770	84.1	98.5	26.0	69.9	71.7	612	64.7	65	NW and variable	114	"	Cloudy.
"	13th	153.7	784	81.3	97.5	28.8	68.7	69.8	575	62.9	64	SW, and N by W	135	"	Chiefly cloudy.
"	14th	161.7	775	83.6	96.9	27.3	69.6	67.5	401	56.7	40	N by W, and NW by N	56	"	Cloudy, o.
"	15th	155.7	718	81.7	97.8	28.2	69.6	67.4	481	57.9	44	SW and variable	72	"	Chiefly cloudy.

The mean pressure of the seven days ... 29.763  
The average pressure of the corresponding period for 24 years, S. G. Office ... 29.748

The mean temperature of the seven days ... 82.3  
The average temperature of the corresponding period for 24 years, S. G. Office ... 85.0  
The extreme variation of temperature during the seven days ... 29.1  
The maximum temperature during the seven days ... 97.8

The highest velocity of the wind in one hour during the seven days ... 18

The highest pressure of the wind on one square foot during the seven days ... 11

The mean relative humidity during the seven days ... 59  
The average relative humidity of the corresponding period for 24 years, S. G. Office ... 69

The total fall of rain from 9th to 15th April 1882 ... 0.14  
The average fall of the corresponding period for 24 years, S. G. Office ... 0.24  
The total fall from 1st January to 15th April 1882 ... 4.21  
The average fall of the corresponding period for 24 years, S. G. Office ... 8.44

The mean pressure, temperature, &c., are deduced from the traces of the Barograph and Thermograph, and from observations made at 6h, 10h, 16h, and 22h.

The maximum and minimum temperatures are obtained from self-registering thermometers. All the thermometers are verified, and the readings have been corrected to a standard constructed and verified at the Kew Observatory. They are exposed under a thatched shed open at the sides, and are suspended four feet above the ground.

The barometer readings are corrected approximately to those of the standard Newman's No. 86, formerly at the Surveyor-General's Office.

The hygrometric elements are obtained from Tables III, IV, and V of the official tables computed in the Meteorological Office, and based on Regnault's modifications of August's formula.

The direction of the movement of the wind are taken from the trace of a Beckley's anemograph.

The mouth of the rain-gauge is one foot above the ground.

o overcast, g gloomy, t thunder, < lightning, / strong wind, p passing temporary showers, lr lightning reflection.

METEOROLOGICAL OFFICE, INDIA,  
The 17th April 1882.

HENRY F. BLANFORD,  
Meteorological Reporter to the Government of India.

Results of the Thermometrical Observations taken at the Meteorological Office,  
Chowringhee, from 9th to 15th April 1882.

MONTH.	Date.	TEMPERATURE.				HYGROMETRY.				Rain.
		Mean.	Maximum.	Range.	Minimum.	Mean wet bulb.	Vapour tension.	Dew point.	Humidity.	
1882.		°	°	°	°	°	Inches.	°	%	Inches.
April	9th	84.1	95.0	18.2	76.8	76.0	.760	72.1	69	Nil.
	10th	84.3	96.8	20.5	76.3	76.9	.826	73.5	70	"
	11th	82.6	97.6	20.8	70.8	73.9	.721	69.5	64	0.22
	12th	83.9	96.8	21.7	75.1	71.0	.586	63.4	50	"
	13th	84.0	98.6	24.0	74.6	70.7	.574	62.8	49	"
	14th	84.0	97.8	24.0	74.8	70.1	.551	61.7	47	"
	15th	84.5	99.7	24.9	74.8	70.2	.548	61.5	46	"

The mean temperature of the seven days ... 83.9  
 The extreme variation of temperature during the seven days ... 28.0  
 The maximum temperature during the seven days ... 99.7

The mean relative humidity during the seven days ... 56%

The total fall of rain from 9th to 15th April 1882 ... 0.22 Inches

The mean temperature and humidity are obtained by applying to the means of the 10h, 16h, and minimum readings a correction dependent on the range, and derived from the hourly observations at the Surveyor-General's Office, Chowringhee, in past years.

METEOROLOGICAL OFFICE, INDIA,  
The 17th April 1882.

HENRY F. BLANFORD.  
Meteorological Reporter to the Govt. of India.

## PUBLIC WORKS DEPARTMENT, -BENGAL.

## IRRIGATION BRANCH.

Statement showing heights over mean sea-level and low water on Rivers Ganges, Bhagirathee, and Brahmapootra for the month of March 1882.

Date.	Miles.	RIVER GANGES.										RIVER BHAGIRATHEE.				BRAHMAPOOTRA.	
		Mirzapore.	Benares.	Buxar.	Dinapore.	Monghyr.	Satebungee.	Rampore Bauleah.	Goalundo.	Behampore.	Krishnagar.	Gowhatly.					
		Height over mean sea-level, of gauge.	Height over mean sea-level, of gauge.	Height over mean sea-level, of gauge.	Height over mean sea-level, of gauge.	Height over mean sea-level, of gauge.	Height over mean sea-level, of gauge.	Height over mean sea-level, of gauge.	Height over mean sea-level, of gauge.	Height over mean sea-level, of gauge.	Height over mean sea-level, of gauge.	Height over mean sea-level, of gauge.	Height over mean sea-level, of gauge.	Height over mean sea-level, of gauge.	Height over mean sea-level, of gauge.	Height over mean sea-level, of gauge.	Height over mean sea-level, of gauge.
1st		205.22	137	165.55	6.65	140.53	2.87	6.33	61.67	1.64	40.93	0.91	10.95	3.59	0.21	8.59	167.16
2nd		204.22	139	165.55	6.60	140.53	2.82	6.33	61.67	1.64	40.93	0.91	10.95	3.59	0.21	8.59	167.16
3rd		204.22	139	165.55	6.60	140.53	2.82	6.33	61.67	1.64	40.93	0.91	10.95	3.59	0.21	8.59	167.16
4th		204.22	139	165.55	6.60	140.53	2.82	6.33	61.67	1.64	40.93	0.91	10.95	3.59	0.21	8.59	167.16
5th		204.22	139	165.55	6.60	140.53	2.82	6.33	61.67	1.64	40.93	0.91	10.95	3.59	0.21	8.59	167.16
6th		204.22	139	165.55	6.60	140.53	2.82	6.33	61.67	1.64	40.93	0.91	10.95	3.59	0.21	8.59	167.16
7th		204.22	139	165.55	6.60	140.53	2.82	6.33	61.67	1.64	40.93	0.91	10.95	3.59	0.21	8.59	167.16
8th		204.22	139	165.55	6.60	140.53	2.82	6.33	61.67	1.64	40.93	0.91	10.95	3.59	0.21	8.59	167.16
9th		204.22	139	165.55	6.60	140.53	2.82	6.33	61.67	1.64	40.93	0.91	10.95	3.59	0.21	8.59	167.16
10th		204.22	139	165.55	6.60	140.53	2.82	6.33	61.67	1.64	40.93	0.91	10.95	3.59	0.21	8.59	167.16
11th		204.22	139	165.55	6.60	140.53	2.82	6.33	61.67	1.64	40.93	0.91	10.95	3.59	0.21	8.59	167.16
12th		204.22	139	165.55	6.60	140.53	2.82	6.33	61.67	1.64	40.93	0.91	10.95	3.59	0.21	8.59	167.16
13th		204.22	139	165.55	6.60	140.53	2.82	6.33	61.67	1.64	40.93	0.91	10.95	3.59	0.21	8.59	167.16
14th		204.22	139	165.55	6.60	140.53	2.82	6.33	61.67	1.64	40.93	0.91	10.95	3.59	0.21	8.59	167.16
15th		204.22	139	165.55	6.60	140.53	2.82	6.33	61.67	1.64	40.93	0.91	10.95	3.59	0.21	8.59	167.16
16th		204.22	139	165.55	6.60	140.53	2.82	6.33	61.67	1.64	40.93	0.91	10.95	3.59	0.21	8.59	167.16
17th		204.22	139	165.55	6.60	140.53	2.82	6.33	61.67	1.64	40.93	0.91	10.95	3.59	0.21	8.59	167.16
18th		204.22	139	165.55	6.60	140.53	2.82	6.33	61.67	1.64	40.93	0.91	10.95	3.59	0.21	8.59	167.16
19th		204.22	139	165.55	6.60	140.53	2.82	6.33	61.67	1.64	40.93	0.91	10.95	3.59	0.21	8.59	167.16
20th		204.22	139	165.55	6.60	140.53	2.82	6.33	61.67	1.64	40.93	0.91	10.95	3.59	0.21	8.59	167.16
21st		204.22	139	165.55	6.60	140.53	2.82	6.33	61.67	1.64	40.93	0.91	10.95	3.59	0.21	8.59	167.16
22nd		204.22	139	165.55	6.60	140.53	2.82	6.33	61.67	1.64	40.93	0.91	10.95	3.59	0.21	8.59	167.16
23rd		204.22	139	165.55	6.60	140.53	2.82	6.33	61.67	1.64	40.93	0.91	10.95	3.59	0.21	8.59	167.16
24th		204.22	139	165.55	6.60	140.53	2.82	6.33	61.67	1.64	40.93	0.91	10.95	3.59	0.21	8.59	167.16
25th		204.22	139	165.55	6.60	140.53	2.82	6.33	61.67	1.64	40.93	0.91	10.95	3.59	0.21	8.59	167.16
26th		204.22	139	165.55	6.60	140.53	2.82	6.33	61.67	1.64	40.93	0.91	10.95	3.59	0.21	8.59	167.16
27th		204.22	139	165.55	6.60	140.53	2.82	6.33	61.67	1.64	40.93	0.91	10.95	3.59	0.21	8.59	167.16
28th		204.22	139	165.55	6.60	140.53	2.82	6.33	61.67	1.64	40.93	0.91	10.95	3.59	0.21	8.59	167.16
29th		204.22	139	165.55	6.60	140.53	2.82	6.33	61.67	1.64	40.93	0.91	10.95	3.59	0.21	8.59	167.16
30th		204.22	139	165.55	6.60	140.53	2.82	6.33	61.67	1.64	40.93	0.91	10.95	3.59	0.21	8.59	167.16
31st		204.22	139	165.55	6.60	140.53	2.82	6.33	61.67	1.64	40.93	0.91	10.95	3.59	0.21	8.59	167.16

G. F. E. S. NALL, Major, M.B.C.,  
Asst. Secy. to the Govt. of Bengal, P. W. Dept.

Dated 6th April 1882.



## PUBLIC WORKS DEPARTMENT, IRRIGATION BRANCH, BENGAL.

Statements showing the total amount of Traffic and Tolls on the Canals for the month of February 1882.

## ORISSA CIRCLE.

## Taldundah Canal.

LENGTH OF CANAL OPEN—27½ MILES.

Number of boats.	Nature of cargo.	APPROXIMATE		TONNAGE OF BOATS.		Ton-mileage.	Tollage.	Rate of toll per ton-mile.
		Weight of cargo.	Value of cargo.	Maunds.	Tons.			

## LOCAL TRAFFIC.

## (1)—PRIVATE.

		Mds.	Rs.				Rs.	A.	P.	A.	P.
1	Clothes	553	3,000	1,062	38	58	1	5	3		
1	Sand cut stone	552	50	440	30	300	8	6	6		
10	Rubble	2,456	102	3,253	116	580	12	7	8		
2	Bamboo	444	45	644	23	276	3	3	6		
1	Beta grass	232	100	420	15	330	4	3	3		
2	Kandaur	1,100	100	1,095	60	605	9	3	4		
1	Till-wood	603	1,500	1,062	38	38	1	5	3		
1	Fuel	90	20	451	16	32	2	4	0		
65	Passengers			43,321	1,547	3,004	216	10	11		
22	Empty			5,345	191	1,628	16	4	11		
106	Total	0,000	4,927	58,093	2,074	6,071	274	6	7	0	7 0
77	Total of same month last year	5,509	15,057	27,216	972	7,044	160	1	0	0	4 0
MISCELLANEOUS.											
5	Logs		9				0	7	6		
8	Gyles		4				0	1	4		
4,400	Bamboos		75				5	8	0		
3,544	Passengers						13	9	4		
	Total		88				19	10	2		
	Total of same month last year		440				46	11	6		

## (2)—STORES AND MATERIALS FOR IRRIGATION WORKS.

23	Laterite cut stone	9,064	314	16,000	573	1,716	40	0	3		
36	Rubble	14,292	580	24,004	889	9,734	119	6	10		
2	Mile stones	693	110	1,200	45	90	6	4	10		
66	Empty			16,724	598	4,183	56	6	0		
117	Total	21,049	1,010	58,897	2,104	15,772	222	2	5	0	2 7
10	Total of same month last year	2,139	69	5,301	180	379	22	8	11	0	11 4
MISCELLANEOUS.											
	Nil.										
	Total										
	Total of same month last year										

## ABSTRACT.

106	Private, including miscellaneous	6,009	5,015	58,093	2,074	6,071	274	0	9		
117	Government stores, including miscellaneous	24,040	1,010	58,897	2,104	15,772	222	2	5		
228	Grand Total	30,118	6,025	1,16,990	4,178	22,743	516	3	2		
67	Grand Total of same month last year	7,039	16,460	32,617	1,161	7,423	219	6	5		

MEMO.						Rs. A. P.	
Unrecovered balance on the 1st of the month						110	6 3
Amount of tollage for the month						516	3 2
					Total	626	9 4
Amount credited in the accounts for the month						537	13 3
Balance at the end of the month						89	12 1



**High Level Canal, Range I.**  
**LENGTH OF CANAL OPEN—34 MILES.**

Number of boats.	Nature of cargo.	APPROXIMATE		TONNAGE OF BOATS.		Ton-mileage	Tollage.	Rate of toll per ton-mile.
		Weight of cargo.	Value of cargo.	Maunds.	Tons.			
LOCAL TRAFFIC.								
(1)—PRIVATE.								
		Mds.	Rs.				Rs. A. P.	A. P.
3	Cotton	200	2,000	57	1	673	8 8 0	.....
9	Cocoanuts	50	100	171	0	204	3 12 0	.....
64	Empty boats	.....	.....	6,790	2 8	15 1	71 3 0	.....
15	Gram	500	2,000	1,077	8	1,085	15 0 0	.....
14	Jingelly	1,500	6,000	2,700	10 1	3,150	60 0 0	.....
4	Jugerry	400	2,000	1,000	0	400	0 8 0	.....
5	Miscellaneous	200	5,000	500	18	540	0 8 6	.....
16	Paddy	400	800	744	27	800	0 12 0	.....
10	Passengers (114 in number)	.....	.....	1,007	20	1,027	27 11 9	.....
11	Salt	650	3,250	1,375	5 1	1,500	35 10 0	.....
1	Salt fish	50	350	85	3	102	2 0 0	.....
3	Timber	100	500	208	8	372	7 12 6	.....
148	Total	4,050	21,800	16,235	579	15,228	277 5 9	0 3 5
140	Total of same month last year	4,340	18,510	17,641	620	17,290	353 8 3	0 3 7
	MISCELLANEOUS.							
	Nil.							
	Total							
	Total of same month last year						0 4 0	

In comparing with the corresponding month of last year, the private trade shows a decrease of Rs. 57, which is due to the decrease of traffic in items passengers and timbers.

**(2)—STORES AND MATERIALS FOR IRRIGATION WORKS.**

31	Empty boats	.....	.....	4,784	171	3,710	14 6 0	.....
36	Laterite stone	0,000	160	16,000	503	16,503	82 8 0	.....
1	Plank	50	30	100	5	170	3 2 0	.....
1	Fun tiles	100	20	175	6	204	4 6 0	.....
69	<b>Total</b>	<b>0,150</b>	<b>200</b>	<b>21,094</b>	<b>775</b>	<b>4,284</b>	<b>104 6 0</b>	<b>0 4 8</b>
64	<b>Total of same month last year</b>	<b>6,800</b>	<b>1,000</b>	<b>18,246</b>	<b>652</b>	<b>5,874</b>	<b>201 7 0</b>	<b>0 5 0</b>
	<b>MISCELLANEOUS.</b>							
	Bamboos (6,000 in number)	.....	50	.....	.....	.....	5 0 0	.....
4	Boats passed free*	.....	.....	.....	.....	.....	.....	.....
4	<b>Total</b>	.....	<b>50</b>	.....	.....	.....	<b>5 0 0</b>	.....
6	<b>Total of same month last year</b>	.....	.....	.....	.....	.....	.....	.....

\* A memorandum of free boats is attached.

**ABSTRACT.**

148	Private, including miscellaneous	4,050	21,800	16,235	579	15,228	277 5 9	.....
73	Government stores, including miscellaneous	9,150	200	21,094	775	4,284	104 6 0	.....
221	<b>Grand Total</b>	<b>13,200</b>	<b>22,000</b>	<b>37,329</b>	<b>1,354</b>	<b>19,512</b>	<b>381 11 9</b>	.....
186	<b>Grand Total of same month last year</b>	<b>11,140</b>	<b>14,510</b>	<b>35,887</b>	<b>1,281</b>	<b>21,264</b>	<b>435 3 3</b>	.....

<b>MEMO.</b>						<b>Rs. A. P.</b>
Unrecovered balance on the 1st of the month						301 1 9
Amount of tollage for the month						386 11 9
<b>Total</b>						<b>777 13 6</b>
Amount credited in the accounts for the month						380 7 0
Balance at the end of the month						397 6 6

<b>MEMO. OF FREE BOATS.</b>					<b>Tollage</b>
<b>PARTICULARS.</b>					<b>re-imbursable.</b>
	<b>No. of boats.</b>	<b>Maundage.</b>	<b>Tonnage.</b>		<b>Rs. A. P.</b>
Passenger boats passed for Government officials on duty	4	516	18		11 4 0
<b>Total</b>	<b>4</b>	<b>516</b>	<b>18</b>		<b>11 4 0</b>

**High Level Canal, Range II.**  
**LENGTH OF CANAL OPEN—12½ MILES.**

**LOCAL TRAFFIC.**

**(1)—PRIVATE.**

1	Cocoanuts	50	100	151	5	65	1 14 0	.....
20	Empty boats	.....	.....	2,000	91	944	14 11 0	.....
10	Jingelly	1,400	5,600	2,577	92	1,104	30 5 0	.....
1	Moons	50	250	141	5	60	1 15 0	.....
6	Salt	2,100	10,500	4,040	144	1,608	51 3 0	.....
8	Passengers (68 in number)	.....	.....	376	21	250	6 6 0	.....
49	<b>Total</b>	<b>3,600</b>	<b>16,450</b>	<b>10,109</b>	<b>369</b>	<b>3,471</b>	<b>106 0 0</b>	<b>0 50</b>
67	<b>Total of same month last year</b>	<b>1,910</b>	<b>2,093</b>	<b>10,800</b>	<b>388</b>	<b>4,803</b>	<b>100 10 6</b>	<b>0 40</b>
	<b>MISCELLANEOUS.</b>							
	Bamboos (3,000 in number)	.....	60	.....	.....	.....	2 6 0	.....
	Timbers (74 in number)	.....	250	.....	.....	.....	3 11 9	.....
	Small doughs (100 in number)	.....	.....	.....	.....	.....	2 0 0	.....
	<b>Total</b>	.....	<b>300</b>	.....	.....	.....	<b>5 12 3</b>	.....
	<b>Total of same month last year</b>	.....	<b>390</b>	.....	.....	.....	<b>43 11 9</b>	.....

In comparing with the corresponding month of last year, the private trade shows a decrease of Rs. 4, which is due to the decrease of traffic in items passengers and timbers.

*High Level Canal, Range II—concluded.*

Number of boats.	Nature of cargo.	APPROXIMATE		TONNAGE OF BOATS.		Ton-mileage.	Tollage.	Rate of toll per ton-mile.
		Weight of cargo.	Value of cargo.	Mauuds.	Tons.			
(21)—STORES AND MATERIALS FOR IRRIGATION WORKS.								
		Mds.	Rs.				Rs. A. P.	Rs. A.
51	Empty boats	.....	.....	10,828	387	4,163	64 8 6	.....
7	Firewood	1,000	100	2,318	83	896	28 2 0	.....
6	Gravel	1,000	20	2,067	74	411	25 15 0	.....
4	Lime stone	500	130	1,415	51	204	16 14 0	.....
18	Laterite stone	5,000	100	11,076	396	4,752	135 15 0	.....
1	Pen tiles	100	30	183	7	84	2 3 0	.....
6	Rubble stone	1,500	30	2,880	103	607	35 0 0	.....
98	Total	.....	10,100	410	30,795	1,101	11,337	308 9 6
245	Total of same month last year	.....	32,200	1,955	81,812	2,921	27,074	877 3 0
MISCELLANEOUS.								
...	Small dongahs	.....	.....	.....	.....	.....	0 9 0	.....
...	Total	.....	.....	.....	.....	.....	0 9 0	.....
...	Total of same month last year	.....	30	.....	.....	.....	5 9 10	.....

### ABSTRACT.

48	Private, including miscellaneous	...	3,600	16,740	10,100	300	3,431	140 8 3	.....
98	Government stores, including miscellaneous	...	10,100	410	30,795	1,101	11,337	300 2 6	.....
141	Grand Total	...	13,700	17,150	40,895	1,401	14,768	440 10 9	.....
312	Grand Total of same month last year	...	34,110	4,470	92,081	3,309	32,777	1,020 2 7	.....

## 31KMO.

	R.	A.	P.
Unrecovered balance on the 1st of the month ... ..	2405	6	0
Amount of tollage for the month ... ..	448	10	9
Total ... ..	2853	11	0
Amount credited in the accounts for the month ... ..	854	6	0
Balance at the end of the month ... ..	370	5	0

High Level Canal, Range III.  
LENGTH OF CANAL OPEN— $6\frac{1}{2}$  MILES.  
LOCAL TRAFFIC.  
(1)—PRIVATE.

1	Empty boat	...	...	...	110	4	28	0 10 0	4
8	Passengers (74 in number)	...	...	...	576	21	147	5 10 7	...
9	Total	...	...	...	686	25	175	6 4 7	0 74
13	Total of same month last year	...	100	510	1,583	57	399	11 9 1	0 58
	MISCELLANEOUS.								
	Nil.								
	Total	...	...	...	...	...	...	...	...
	Total of same month last year	...	...	...	...	...	...	...	...

In comparing with the corresponding month of last year, the private trade shows a decrease of Rs. 6, which is due to the decrease of traffic in items jaggery, khassari, and paddy.

(2)—STORES AND MATERIALS FOR IRRIGATION WORKS.

[illegible]

## ABSTRACT

9	Private, including miscellaneous ...			686	25	175	6 4 7	.....
64	Government stores, including miscellaneous ...	6,650	240	81,151	647	4,429	178 14 0	.....
73	Grand Total	6,650	240	18,837	672	4,704	185 2 7	.....
90	Grand Total of same month last year ...	8,610	1,840	23,951	856	5,992	246 13 7	.....

## MIMO.

MEMO.					Ba. A. P.	
Unrecovered balance on the 1st of the month	...	...	...	...	286	6 0
Amount of tollage for the month	...	...	...	...	288	3 7
				<b>Total</b>	...	475 8 7
Amount credited in the accounts for the month	...	...	...	...	270	8 9
Balance at the end of the month	...	...	...	...	203	4 10

## SOUTH-WESTERN CIRCLE.

## Midnapore Canal.

LENGTH OF CANAL OPEN—53 MILES.

Number of boats.	Nature of cargo.	APPROXIMATE		TONNAGE OF BOATS.		Ton-nage.	Tollage.	Rate of toll per ton-mile.
		Weight of cargo.	Value of cargo.	Maunds.	Tons.			

## LOCAL TRAFFIC.

## (1)—PRIVATE.

		Mds.	Rs.			Rs. A. P.	A. P.
13	Coal	5,850	1,915	9,025		100 9 0	
19	Coke	5,050	3,520	9,675		72 4 0	
22	Earthenware	2,080	442	4,950		25 7 6	
27	Sand	1,850	185	3,225		12 1 6	
7	Lime	50	40	125		0 7 6	
10	Timbers (48 in number)	294	572	265		18 0 0	
6	Firewood	270	40	665		3 13 9	
15	Brass	2,480	1,10,500	5,230		35 12 3	
6	Copper	500	12,500	1,850		5 12 0	
16	Cotton	2,170	38,850	5,065		40 2 0	
4	Cotton piece-goods (European)	370	24,500	1,300		41 8 0	
1	Gunny (Indian, 700 in number)	200	1,000	700		3 12 0	
4	Jute	50	200	175		0 10 4	
1	Mats	200	1,000	480		5 7 6	
353	Paddy	40,770	27,000	70,080		1 17 9	
199	Rice	38,400	65,078	71,465		70 2 0	
2	Wheat	200	800	625		4 6 6	
45	Gram	5,405	17,850	13,390		14 11 0	
21	Mustard seed	2,800	10,800	6,800		42 2 0	
2	Other oil-seed	650	1,620	1,225		18 12 0	
6	Indigo seed	2,020	18,550	3,800		17 15 0	
84	Other oils	980	4,700	2,250		27 0 0	
1	Fruits	4,452	3,575	11,220		19 1 0	
24	Vegetables	100	150	225		3 6 0	
4	Tobacco	3,365	25,100	7,025		87 10 0	
24	Spices	450	4,025	1,000		9 11 0	
17	Cocoanuts (11,000 in number)	200	240	1,800		12 1 6	
3	Straw (95 kahana)	920	384	3,600		20 10 0	
26	Betelnuts	250	1,400	850		9 11 0	
28	Sugar, unrefined	3,010	12,955	6,550		41 5 6	
3	Salt	6,950	25,200	12,500		23 15 0	
3	Sagai	850	850	1,425		18 2 0	
12	Cattle (42 in number)	200	650	400		2 0 0	
3	Hides (10,680 in number)	3,475	14,800	4,400		40 7 6	
984	Horns	300	6,000	725		5 9 0	
187	Empty boats			95,050		7 8 0	
25	Passenger boats			92,795		16 2 0	
5	Hotel leaves	1,317	7,115	3,480		39 2 0	
7	Gonds (200 in number)	61	600	465		7 7 3	
7	Sal piles (323 in number)	650	695	680		7 5 9	
42	Stone plates	630	1,500	1,175		0 8 6	
12	Cotton twist and yarn (European)	5,580	1,90,000	14,375		120 12 6	
16	Do. piece-goods (Indian)	240	26,750	1,200		10 7 0	
22	Curd	1,350	4,050	3,500		19 8 0	
1	Miscellaneous	2,680	5,277	6,310		21 2 0	
5	Other fibres, raw	150	750	360		2 10 0	
15	Bamboos (642 in number)	250	100	250		2 4 9	
3,950	Total	1,47,582	6,70,705	4,84,095	15,603	3,08,058	4,567 10 0
2,900	Total of same month last year	1,38,810	7,64,741	4,98,073	16,615	2,34,450	3,802 6 0
	MISCELLANEOUS.						
18	Passengers (12,670 in number)					214 10 3	
18	Demurrage, &c.					5 0 0	
18	Boats passed free						
18	Total					219 10 3	
15	Total of same month last year					266 14 0	

## (2)—STORES AND MATERIALS FOR IRRIGATION WORKS

NH.		NH.					
	Total						
	Total of same month last year						
	MISCELLANEOUS.						
	Total						
	Total of same month last year						



## Midnapore Canal—concluded.

Number of boats.	Nature of cargo.	APPROXIMATE		TOWNSHIP OF BOATS.		Ton-mileage.	Tollage.	Rate of toll per ton-mile.
		Weight of cargo.	Value of cargo.	Maunder.	Tons.			
3,038	Private, including miscellaneous	1,47,552	6,70,705	4,34,095	15,503	3,06,053	5,115 5 0	
3,038	Government stores, including miscellaneous							
3,038	Grand Total	1,47,552	6,70,705	4,34,095	15,503	3,06,053	5,115 5 0	
2,975	Grand Total of same month last year	1,38,810	7,54,741	4,38,075	15,045	2,34,439	4,069 4 0	

## ABSTRACT.

		Mds.	Ra.				Ra. A. P.	A. P.
3,038	Private, including miscellaneous	1,47,552	6,70,705	4,34,095	15,503	3,06,053	5,115 5 0	
3,038	Government stores, including miscellaneous							
3,038	Grand Total	1,47,552	6,70,705	4,34,095	15,503	3,06,053	5,115 5 0	
2,975	Grand Total of same month last year	1,38,810	7,54,741	4,38,075	15,045	2,34,439	4,069 4 0	

## MEMO.

## Ra. A. P.

Unrecovered balance on the 1st of the month	...	...	...	...	...	1,198 13 9	
Amount of tollage for the month	...	...	...	...	...	5,115 5 0	
Total	...	...	...	...	...	6,314 2 9	
Amount credited in the accounts for the month	...	...	...	...	...	5,502 3 0	
Balance at the end of the month	...	...	...	...	...	811 15 9	

## Hidgellee Tidal Canal.

LENGTH OF CANAL OPEN—29 MILES.

## LOCAL TRAFFIC.

## (1)—PRIVATE.

1	Betelnut	20	120	70	...	...	0 12 6	...
1	Betel leaves	10	20	50	...	...	0 5 4	...
5	Bamboos	505	560	1,050	...	...	11 5 6	...
2	Brass manufacture	8	320	70	...	...	0 13 6	...
2	Beans	50	54	120	...	...	0 13 0	...
11	Coal	3,225	803	6,150	...	...	79 6 6	...
2	Coconut	45	63	140	...	...	2 14 3	...
9	Cotton piece-goods (European)	585	14,123	1,693	...	...	17 7 3	...
8	Earthenware	285	151	1,620	...	...	9 0 6	...
632	Empty boats	...	...	67,215	...	...	707 10 0	...
8	Firewood	755	316	1,920	...	...	17 10 0	...
11	Gunny-bags	600	2,400	2,900	...	...	22 12 0	...
2	Gums	20	5	80	...	...	1 6 0	...
12	Goat-hair	2,210	676	4,100	...	...	28 3 0	...
4	Hides	90	2,950	750	...	...	10 13 0	...
1	Horse mat	25	100	125	...	...	0 13 9	...
2	Jute	220	380	510	...	...	4 2 9	...
1	Lime	200	200	425	...	...	2 14 9	...
18	Miscellaneous	585	1,880	1,855	...	...	15 11 6	...
2	Mat	240	510	480	...	...	3 10 0	...
18	Oil	1,395	18,570	3,765	...	...	28 9 0	...
1	Oil-cake	20	20	60	...	...	0 6 6	...
1	Other seed	300	300	525	...	...	3 9 9	...
6	Plank	275	1,250	795	...	...	5 2 3	...
317	Paddy	38,945	22,797	69,435	...	...	934 9 0	...
71	Passenger boats	...	...	4,465	...	...	47 0 0	...
648	Rice	54,295	54,250	1,04,160	...	...	1,043 2 3	...
57	Straw	4,405	1,778	11,405	...	...	79 6 9	...
24	Salt	6,474	25,898	12,850	...	...	136 13 6	...
2	Sand	350	...	675	...	...	4 10 3	...
2	Sugar, unrefined	195	440	305	...	...	2 3 6	...
78	Tobacco	3,140	18,840	9,315	...	...	103 9 0	...
1	Timber	40	100	125	...	...	0 13 9	...
26	Vegetable	800	1,946	1,900	...	...	16 13 3	...
1,864	Total	1,17,953	1,71,600	3,11,235	11,116	1,80,033	3,315 10 0	0 33
1,884	Total of same month last year	1,20,964	1,86,431	3,24,500	11,589	2,10,178	3,047 9 9	0 33

## MISCELLANEOUS.

...	Passengers (393 in number)	...	...	...	...	...	10 9 0	...
...	9 Rafts of timber	558	980	...	...	...	14 15 3	...
...	5 Ditto of bamboo	35	45	...	...	...	1 4 0	...
...	Demurrage, &c	...	...	...	...	...	16 4 0	...
3	Boats passed free	...	...	...	...	...	...	...
3	Total	604	1,025	...	...	...	43 2 3	...
...	Total of same month last year	...	...	...	...	...	71 15 6	...

## (2)—STORES AND MATERIALS FOR IRRIGATION WORKS.

1	Portland cement	982	423	775	...	...	14 0 9	...
1	Tools and plant	30	180	60	...	...	0 6 6	...
2	Total	312	573	835	80	825	14 7 3	...
138	Total of same month last year	60,224	15,038	1,06,075	3,788	1,00,863	1,022 9 8	...
...	MISCELLANEOUS.	...	...	...	...	...	...	...
...	Nil.	...	...	...	...	...	...	...
...	Total	...	...	...	...	...	...	...
...	Total of same month last year	...	...	...	...	...	...	...

\* The tolls realized last year were on account of the coal conveyed for the Orissa Coast Canal works.



*Eastern Main and Patna Canals—concluded.*

Number of boats.	Nature of cargo.	APPROXIMATE		TONNAGE OF BOATS.		Ton- mileage.	Tollage.	Rate of toll per ton-mile
		Weight of cargo.	Value of cargo.	Maunds.	Tons.			
ABSTRACT.								
174	Private, including miscellaneous ... ..	22,671	82,397	46,770	1,984	1,01,108	1,703 0 3	.....
62	Government stores, including miscellaneous	13,655	3,550	23,411	674	38,984	252 1 0	.....
236	Grand Total ... ..	36,326	85,947	70,181	2,657	1,40,092	1,955 1 3	.....
233	Grand Total of same month last year ...	20,402	92,092	53,476	1,894	1,13,938	1,838 0 0	.....

## MEMO.

	Rs.	A.	P.
Unrecovered balance on the 1st of the month ...	...	...	...
Amount of tollage for the month ...	...	...	...
Amount credited in the accounts for the month ...	...	...	...
Balance at the end of the month ...	...	...	...
Total	2,022	1	3
	1,950	15	6
	121	1	9

*Western Main Canal.*

LENGTH OF CANAL OPEN—22 MILES.

## LOCAL TRAFFIC.

## (1)—PRIVATE.

1	Wheat ...	100	900	200	7	354	4 0 0	.....
5	Jaggery ...	1,600	3,200	2,400	86	4,472	41 12 3	.....
10	Linsseed ...	4,000	8,000	5,600	202	2,020	35 5 0	.....
11	Mustard ...	4,10	12,300	5,876	210	2,100	30 1 6	.....
1	Bastars ...	400	60	600	18	648	7 3 0	.....
1	Brick clods ...	300	40	450	16	160	3 4 6	.....
1	Stone ...	700	100	1,050	37	902	3 4 6	.....
22	Empty boats ...	.....	.....	2,275	81	810	7 7 9	.....
4	Toll charged for excess weight on 22 maunds from Arrah to Bedadco.	.....	.....	.....	.....	.....	2 3 0	.....
57	Total ...	11,200	23,890	18,400	657	11,536	140 12 0	0 2 3
25	Total of same month last year ...	9,200	19,750	9,250	327	15,142	183 12 3	0 2 3
	MISCELLANEOUS.							
	Nil.	.....	.....	.....	.....	.....	.....	.....
	Total ...	.....	.....	.....	.....	.....	.....	.....
	Total of same month last year ...	.....	.....	.....	.....	.....	.....	.....

## (2)—STORES AND MATERIALS FOR IRRIGATION WORKS.

40	Rubble stone and Ashlar stone ...	20,700	1,035	28,550	1,019	40,760	236 6 0	.....
40	Total ...	20,700	1,035	28,550	1,019	40,760	236 6 0	0 1 3
6	Total of same month last year ...	2,700	183	3,450	122	5,518	24 12 3	0 1 3
	MISCELLANEOUS.							
	Nil.	.....	.....	.....	.....	.....	.....	.....
	Total ...	.....	.....	.....	.....	.....	.....	.....
	Total of same month last year ...	.....	.....	.....	.....	.....	.....	.....

## ABSTRACT.

67	Private, including miscellaneous ...	11,200	23,890	18,400	657	11,536	140 12 0	.....
49	Government stores, including miscellaneous	20,700	1,035	28,550	1,019	40,760	236 6 0	.....
106	Grand Total ...	31,900	24,925	46,950	1,676	52,296	427 8 0	.....
31	Grand Total of same month last year ...	9,900	19,883	12,700	449	18,660	208 8 6	.....

## MEMO.

	Rs.	A.	P.
Unrecovered balance on the 1st of the month ...	...	...	...
Amount of tollage for the month ...	...	...	...
Amount credited in the accounts for the month ...	...	...	...
Balance at the end of the month ...	...	...	...
Total	487	18	6
	487	5	9
	93	7	9

Arrah Canal.

LENGTH OF CANAL OPEN—65 MILES.

Number of boats.	Nature of cargo.	APPROXIMATE		TONNAGE OF BOATS.		Ton-mileage.	Tollage.	Rate of toll per ton-mile.
		Weight of cargo.	Value of cargo.	Mauuds.	Tons.			

LOCAL TRAFFIC.

(1)—PRIVATE.

		Mds.	Rs.				Rs. A. P.	A. P.
47	Rice	16,327	52,654	23,327	833	61,746	407 4 3	.....
38	Salt	10,134	45,536	15,844	595	21,910	235 10 6	.....
77	Other articles of food	11,416	22,352	22,916	848	28,289	295 13 0	.....
8	Lime	3,918	3,918	5,068	181	10,010	46 11 0	.....
16	Stone	776	133	1,076	38	2,850	8 3 0	.....
10	Linseed	4,754	14,262	5,754	205	15,376	88 4 6	.....
10	Mustard	5,107	16,221	7,807	278	19,594	97 14 0	.....
3	Coal	1,280	640	1,730	61	2,620	13 4 9	.....
1	Wool	38	12	98	3	108	1 6 0	.....
2	Piece-goods	60	3,000	160	5	168	1 14 3	.....
1	Grass	57	100	157	5	200	3 4 6	.....
50	Empty			5,285	188	4,098	26 0 0	.....
11	Passengers			473	16	441	3 15 9	.....
290	Total	54,167	1,34,309	89,085	3,106	1,08,048	1,280 9 6	0 14
245	Total of same month last year	29,438	65,265	55,663	1,982	72,807	733 0 9	0 15
MISCELLANEOUS.								
	Rafts of handies and bullies (196,875 in number)						182 4 9	.....
	Total						182 4 9	.....
	Total of same month last year						242 3 0	.....

(2)—STORES AND MATERIALS FOR IRRIGATION WORKS.

1	Iron	332	780	492	17	986	16 6 3	.....
2	Stones	595	102	805	31	1,540	7 10 3	.....
4	Empty			507	18	404	4 15 0	.....
7	Total	927	882	1,894	66	3,130	22 15 6	0 13
14	Total of same month last year	1,101	614	2,815	96	3,925	30 9 3	0
MISCELLANEOUS.								
	Nil.							.....
	Total							.....
	Total of same month last year							.....

ABSTRACT.

306	Private, including miscellaneous	54,167	1,34,309	89,085	3,106	1,08,048	1,471 14 3	.....
7	Government stores, including miscellaneous	927	882	1,894	66	3,130	22 15 6	.....
308	Grand Total	55,094	1,35,190	91,000	3,202	1,11,178	1,494 13 9	.....
250	Grand Total of same month last year	30,559	65,879	58,498	2,078	70,782	1,005 13 0	.....

MEMO.

Rs. A. P.

Unrecovered balance on the 1st of the month	78 6 9
Amount of tollage for the month	1,404 13 0
Total	1,508 4 6
Amount credited in the accounts for the month	1,528 7 8
Balance at the end of the month	80 13 3

Buxar Canal.

LENGTH OF CANAL OPEN—43½ MILES.

Number of boats.	Nature of cargo.	APPROXIMATE		TONNAGE OF BOATS.		Ton-mileage.	Tollage.	Rate of toll per ton-mile.
		Weight of cargo.	Value of cargo.	Mauuds.	Tons.			

LOCAL TRAFFIC.

(1)—PRIVATE.

		Mds.	Rs.				Rs. A. P.	A. P.
100	Jaggery	30,870	48,475	30,625	1,092	40,780	624 15 6	.....
	Rice	225	150	325	11	550	6 1 6	.....
	Potatoes	100	100	150	5	180	2 1 0	.....
	Radly	500	300	235	8	128	1 4 3	.....
	Boxes of shoes, &c.	25	200	100	3	108	1 6 0	.....
	Centering and screens, &c.	250	150	200	7	112	1 2 0	.....
	Horns, &c.	50	70	25	1	87	0 5 6	.....
	Kunkur	1,100	1,050	1,025	36	720	4 2 6	.....
	Stone mills	1,533	800	1,425	51	816	13 3 3	.....
	Lime	70	18	50	2	100	1 13 3	.....
	Wood	1,202	480	1,105	39	2,202	25 15 8	.....
	Passenger			125	4	144	1 11 0	.....
122	Empty boats			8,275	203	9,600	53 2 0	.....
240	Total	35,701	52,695	49,955	1,552	55,537	537 3 6	0 1½
28	Total of same month last year	4,775	5,100	7,225	200	9,685	94 2 0	0 1½
	MISCELLANEOUS.							
	Rafts—{ Bamboos	326,525					120 4 6	.....
	Excess toll realized for wrong calculation...	5,055					3 7 0	.....
	Total						123 11 6	.....
	Total of same month last year		275				0 9 9	.....

(2) STORES AND MATERIALS FOR IRRIGATION WORKS.

12	Rubble stone	4,735	9,470	5,720	203	7,014	88 10 0	.....
1	Iron and rope, &c.	354	708	275	10	580	7 10 6	.....
10	Coal	1,006	948	2,075	93	1,800	14 2 3	.....
63	Empty boats			8,550	342	11,705	81 1 6	.....
86	Total	6,995	11,126	18,320	650	24,099	141 8 3	0 1
11	Total of same month last year			1,375	40	1,841	9 13 3	0 1½
	MISCELLANEOUS.							
	Nil.							.....
	Total							.....
	Total of same month last year							.....

ABSTRACT.

240	Private, including miscellaneous	35,701	52,695	49,955	1,552	55,537	660 15 0	.....
86	Government stores, including miscellaneous	6,995	11,126	18,325	650	24,099	141 8 3	.....
326	Grand Total	42,696	63,821	61,980	2,202	79,636	802 7 3	.....
39	Grand Total of same month last year	4,775	5,435	8,600	305	11,529	104 9 0	.....

	Memo.	Rs. A. P.
Unrecovered balance on the 1st of the month	.....	40 5 6
Amount of tollage for the month	.....	302 7 8
	Total	342 13 9
Amount credited in the accounts for the month	.....	779 10 8
Balance at the end of the month	.....	63 2 6



ABSTRACT.

	TRAFFIC, 1881-82.				TRAFFIC, 1880-81.				REMARKS.
	During the month.		To end of the month.		During the corresponding month.		To end of the corresponding month.		
ORISSA CIRCLE.									
	Rs.	A. P.	Rs.	A. P.	Rs.	A. P.	Rs.	A. P.	
Taldunda ... ..	516	3 2	2,050	6 7	219	5 5	2,717	4 8	
Kondrapara ... ..	5,824	7 0	35,781	10 11	3,370	4 8	21,003	4 0	
High Level Canal Range I. ... ..	386	11 0	2,772	2 9	435	3 3	3,110	3 0	
Do. do. II. ... ..	449	10 9	6,371	2 6	1,029	2 7	3,873	8 8	
Do. do. III. ... ..	185	2 7	1,221	4 1	244	17 7	715	1 11	
Total Orissa Circle ... ..	7,362	4 0	47,006	12 10	5,248	13 6	35,449	7 0	
SOUTH-WESTERN CIRCLE.									
Midnapore ... ..	5,115	5 0	87,089	3 0	4,069	4 0	70,822	1 0	
Hidgollee Tidal ... ..	3,373	3 6	39,597	7 0	5,642	3 0	6,376	14 6	
Total Month-Western Circle ... ..	8,488	8 6	1,27,586	10 6	9,711	7 0	77,198	15 6	
SONE CIRCLE.									
Eastern Main and Patna ... ..	1,057	1 3	27,405	6 4	1,588	9 3	23,782	7 3	
Western Main ... ..	427	2 0	3,622	5 0	208	4 6	2,316	15 0	
Arrah ... ..	1,484	13 9	14,165	14 3	1,005	13 0	7,119	7 8	
Buxar ... ..	802	7 3	3,566	1 10	104	9 0	254	6 6	
Total Sone Circle ... ..	4,681	8 3	48,760	11 5	3,177	8 0	33,479	4 5	
GRAND TOTAL ... ..	20,532	4 9	2,23,444	2 8	18,137	12 6	1,88,975	10 11	

GOVERNMENT TRANSPORT SERVICE.

	TRAFFIC, 1881-82.			TRAFFIC, 1880-81.		
	During the month.		To end of the month.	During the corresponding month.		To end of the corresponding month.
	Passengers.	Goods.	Total receipts.	Passengers.	Goods.	Total receipts.
<b>ORISSA CIRCLE.</b>						
	No. Mds.	Rs. A. P.	No. Mds.	Rs. A. P.	No. Mds.	Rs. A. P.
Taldunda and Kondrapara ... ..	2,600		3,359 9 3	13,007 775	26,700 1 10	442 778 1,154 1 10
High Level ... ..	170	286	113 6 0	1,842 1,581	946 9 3	151 149 93 2 4
Total Orissa Circle ... ..	2,770	286	3,472 15 3	15,149 2,356	27,646 11 1	593 927 1,247 4 2
<b>SOUTH-WESTERN CIRCLE.</b>						
Midnapore ... ..	6,663	353	2,422 0 0	43,139 5,350	10,612 0 0	776 156 479 0 0
Total South-Western Circle ... ..	6,663	353	2,422 0 0	43,139 5,350	10,612 0 0	776 156 479 0 0
<b>SONE CIRCLE.</b>						
Eastern Main and Patna ... ..	843	2,762	811 9 6	11,049 32,004	9,772 13 3	900 1,384 650 14 6
Western Main and Buxar ... ..	1,047	2,389	629 9 0	11,664 43,813	8,520 12 6	...
Arrah ... ..	1,961	1,259	1,341 0 0	24,479 14,057	16,730 0 0	1,006 700 1,102 0 0
Total Sone Circle ... ..	3,851	6,410	2,782 2 6	47,192 90,474	35,023 0 0	2,505 2,174 1,752 14 6
GRAND TOTAL ... ..	13,280	7,029	8,677 1 9	105,780 98,178	82,282 4 10	3,874 3,257 3,470 2 8

TOTAL NAVIGATION RECEIPTS.

	EARNINGS, 1881-82.		EARNINGS, 1880-81.		REMARKS.
	During the month.	To end of the month.	During the corresponding month.	To end of the corresponding month.	
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
Orissa Canals ... ..	10,835 3 3	74,743 7 11	6,406 1 8	61,267 14 3	
Andnapore ... ..	7,687 5 6	1,07,601 3 0	4,548 4 0	51,071 7 9	
Hidgollee ... ..	5,373 3 6	39,597 7 6	5,642 3 0	40,276 14 6	
Sone ... ..	7,463 10 9	83,784 5 2	4,930 6 6	64,934 0 8	
GRAND TOTAL ... ..	31,358 12 4	2,06,728 5 2	21,526 11 4	2,17,548 38 3	

G. F. E. S. NEILL, Major, M.S.C.,  
Asst. Secy. to the Government of Bengal,  
P. W. Dept.

CALCUTTA.  
The 17th April 1882.

## Calcutta and South-Eastern State Railway.

Statement showing Increases and Decreases in maundage of Staples carried over the line during the month of March 1882, as compared with the corresponding period of March 1881.

STAPLES.	1881.		1882.		1881.	1882.	Increase.	Decrease.
	Up.	Down.	Up.	Down.	Total.	Total.		
Building materials	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.
Railway materials	1,914	.....	17,412	.....	1,914	17,412	16,198	.....
Coal	8,913	.....	14,296	.....	8,913	14,296	5,473	.....
Revenue store	4,096	.....	12,248	.....	4,096	12,248	8,152	.....
Firewood	1,365	.....	1,641	.....	1,365	1,641	276	.....
Hay	47,426	.....	51,930	.....	47,426	51,930	4,504	.....
Straw	8,700	.....	8,602	.....	8,700	8,602	.....	98
Woolloo	2,880	.....	3,408	.....	2,880	3,408	528	.....
Rice	5,980	.....	6,778	.....	5,980	6,778	798	.....
Paddy	20,800	.....	80,777	.....	20,800	80,777	59,977	.....
Sundries	3,385	.....	7,012	.....	3,385	7,012	3,627	.....
Total	98,171	17,508	1,60,669	52,923	1,10,669	2,13,590	97,401	36

## INCREASE.

Mds.

Building materials	.....	.....	.....	.....	.....	16,198
This increase is due to the materials carried for the Sonapur-Mugra Extension.	.....	.....	.....	.....	.....	.....
Railway materials	.....	.....	.....	.....	.....	5,473
This increase in railway materials is due to the railway materials carried for the Sonapur-Mugra Extension.	.....	.....	.....	.....	.....	.....
Coal	.....	.....	.....	.....	.....	8,152
This increase is due to the coal being required partly for brick-burning for the Sonapur-Mugra Extension and for Rice-mills at Canning.	.....	.....	.....	.....	.....	.....
Firewood	.....	.....	.....	.....	.....	4,504
This increase is due to wood wagons being employed to carry firewood only and not any other materials.	.....	.....	.....	.....	.....	.....
Straw	.....	.....	.....	.....	.....	588
This increase in straw is due to greater demand in the selling station.	.....	.....	.....	.....	.....	.....
Woolloo	.....	.....	.....	.....	.....	793
This increase in woolloo is due to greater demand in the selling station.	.....	.....	.....	.....	.....	.....
Rice	.....	.....	.....	.....	.....	50,977
This increase in rice is due to the working of Rice-mills at Canning on an extensive scale.	.....	.....	.....	.....	.....	.....
Paddy	.....	.....	.....	.....	.....	3,627
This increase in paddy is due to the better crop.	.....	.....	.....	.....	.....	.....
Sundries	.....	.....	.....	.....	.....	6,937
This increase in sundries is due to greater demand at Canning for the working of Rice-mills and for Sonapur-Mugra Extension.	.....	.....	.....	.....	.....	.....

Calcutta, the 17th April 1882.

R. G. MOOKERJEE, Manager.

## Nalhati State Railway.

Statement showing Increases and Decreases in maundage of Staples carried over the line during the month of March 1882 as compared with the corresponding period of March 1881.

STAPLES.	1881.		1882.		1881.	1882.	Increase.	Decrease.
	Up.	Down.	Up.	Down.	Total.	Total.		
Silk and silk-clothes	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.
Edible grain	137	2,733	.....	682	137	682	90	.....
Brass and bell-metal ware	270	101	.....	3,774	2,870	4,342	1,472	.....
Sugar and jagree	815	.....	.....	146	371	335	.....	36
Piece-goods	1,345	.....	1,161	.....	1,345	434	117	.....
Cotton	907	.....	449	.....	907	1,101	.....	194
Seeds of all sorts	9,589	.....	3,530	26	9,589	3,556	.....	6,033
Coal	4,693	.....	4,320	.....	4,693	4,320	.....	373
Sundries	6,520	62	3,406	1,347	7,390	4,743	.....	2,607
Salt	.....	.....	3,480	.....	.....	3,480	3,480	.....
Revenue stores	.....	.....	609	311	.....	820	820	.....
Total	23,743	4,247	17,043	6,286	27,989	24,220	5,879	4,630

## INCREASE.

Mds.

Edible grain	.....	.....	.....	.....	.....	1,472
For want of sufficient water in the river Bhagiruttee this year grain is sent by railway.	.....	.....	.....	.....	.....	.....
Salt	.....	.....	.....	.....	.....	3,380
The increase is due to the above cause.	.....	.....	.....	.....	.....	.....
Revenue stores	.....	.....	.....	.....	.....	820
Previously all Revenue stores used to be carried free, but now charge is made for them.	.....	.....	.....	.....	.....	.....

## DECREASE.

Cotton	.....	.....	.....	.....	.....	518
The previous stock not yet exhausted.	.....	.....	.....	.....	.....	.....
Seeds of all sorts	.....	.....	.....	.....	.....	6,033
For want of sufficient water in the river Bhagiruttee seeds for Beldanga, Ramnugger and Soorjapur, which are situated on the river some miles below Azimgunge, cannot be carried by boats this year as before, and hence they are going by Sainthea station instead of coming to Azimgunge.	.....	.....	.....	.....	.....	.....
Sundries	.....	.....	.....	.....	.....	2,007
Last year Executive Engineer, Berhampore, brought in bricks from Nalhati, but this year no bricks brought and hence the decrease.	.....	.....	.....	.....	.....	.....

Calcutta, the 17th April 1882.

R. G. MOOKERJEE, Manager.

## Weekly Return of Traffic Receipts on Indian Railways

## EAST INDIAN RAILWAY.

Approximate Return of Traffic for week ended 8th April 1882, on 1,506½ miles open.

	COACHING TRAFFIC.		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings (estimated).	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
Total traffic for the week ...	173,786	Rs. A. P. 2,66,331 9 0	Mds. s. 21,80,004 20	Rs. A. P. 6,51,761 8 9	Rs. A. P. 19,001 14 0	Rs. A. P. 9,37,584 15 9	53,562½	118,011½	171,573½
Or per mile of railway ...	115	176 12 2	14 4	432 9 0	13 1 1	622 6 3	.....	.....	.....
For previous 13 weeks of half-year ...	2,734,944½	44,12,340 12 9	3,03,01,630 0	91,27,032 5 3	2,59,474 7 10	1,37,98,547 9 10	726,799½	1,589,992	2,316,791½
Total for 14 weeks ...	2,908,730½	46,78,672 5 9	3,24,87,664 20	97,78,763 14 0	2,70,166 5 10	1,47,36,692 9 7	780,161	1,710,043½	2,490,204½
COMPARISON.									
Total for corresponding week of previous year ...	170,685½	2,27,307 5 7	19,31,886 20	5,91,833 9 6	14,482 4 8	5,33,693 3 9	50,877	109,325	158,202
Per mile of railway corresponding week of previous year ...	114	151 2 5	12 8	393 7 1	9 10 0	354 3 6	.....	.....	.....
Total to corresponding date of previous year ...	2,571,283	36,68,831 9 0	2,81,70,430 10	80,03,023 13 6	2,53,480 5 11	1,26,05,386 12 5	712,758	1,674,665	2,387,423

## EASTERN BENGAL RAILWAY.

Approximate Return of Traffic for week ended 8th April 1882, on 171½ miles open.

	COACHING TRAFFIC.		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings (estimated).	Total earnings.	TOTAL TRAIN-MILES RUN.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
Total traffic for the week ...	42,529	Rs. A. P. 38,651 0 0	Mds. s. 2,25,632 0	Rs. A. P. 36,118 0 0	Rs. A. P. 1,792 0 0	Rs. A. P. 70,561 0 0	6,000½	6,765	12,764½
Or per mile of railway ...	248	225 0 8	1,313 0	210 4 9	10 6 11	415 12 4	.....	.....	.....
For previous 13 weeks of half-year ...	620,999½	4,18,265 0 0	33,38,412 0	5,77,233 0 0	7,470 0 0	10,02,008 0 0	77,534½	62,935	170,550½
Total for 14 weeks ...	663,628½	4,56,916 0 0	35,64,044 0	6,13,951 0 0	9,262 0 0	10,70,520 0 0	83,595	80,790	164,385
COMPARISON.									
Total for corresponding week of previous year ...	39,924½	27,585 0 0	2,28,760 0	33,502 0 0	3,321 0 0	64,108 0 0	5,936½	6,873½	12,700
Per mile of railway corresponding week of previous year ...	227	156 15 3	1,301 25	190 9 11	18 14 4	386 7 6	.....	.....	.....
Total to corresponding date of previous year ...	643,721	4,48,880 0 0	30,53,510 0	5,26,156 0 0	9,531 0 0	9,84,576 0 0	82,638½	91,647½	174,186

Includes Rs. 100 on account of Revenue stores.

## BENGAL PROVINCIAL RAILWAYS.

## Weekly Statement of Traffic Receipts.

No. 10.

Latest return received.	Name of Railway.	Length open.	RECEIPTS FOR WEEK ENDING		TOTAL RECEIPTS FROM 1ST JANUARY		Total increase in 1882.	Total decrease in 1882.	Percentage of increase or decrease.
			12th March 1881.	11th March 1882.	To 12th March 1881.	To 11th March 1882.			
1882.		Miles.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs.	
1st March	Northern Bengal	234	32,794 0 0	34,968 0 0	3,35,642 0 0	3,80,238 0 0	53,591 0 0	.....	+16
ditto	Burnpur	85	10,039 0 0	12,843 0 0	1,11,238 0 0	1,33,417 0 0	22,179 0 0	.....	+19
ditto	Patna-Gya	67	12,189 0 0	11,405 0 0	90,750 0 0	1,23,408 0 0	32,739 0 0	.....	+36
ditto	Calcutta and South-Eastern	23	2,904 0 0	3,461 0 0	31,698 0 0	36,036 0 0	4,338 0 0	.....	+13
ditto	Nahari	27½	1,378 0 0	1,238 0 0	13,957 0 0	14,408 0 0	451 0 0	.....	+4
	Total	430½	60,194 0 0	63,917 0 0	5,83,274 0 0	6,96,670 0 0	1,13,405 0 0	.....	+19

## DARJEELING HIMALAYAN RAILWAY COMPANY, LIMITED.

## Weekly Statement of Traffic Receipts.

The latest return received.	Length open.	RECEIPTS FOR WEEK ENDING		TOTAL RECEIPTS FROM 1ST JANUARY		Total increase in 1882.	Total decrease in 1882.	Percentage of increase or decrease.
		12th March 1881.	11th March 1882.	To 12th March 1881.	To 11th March 1882.			
14th April 1882.	50	Rs. A. P. 5,511 11 6*	Rs. A. P. 6,408 8 3	Rs. A. P. 20,413 7 11*	Rs. A. P. 53,455 4 1	Rs. A. P. 27,941 12 2	.....	+17 (proportional).

\* Length open 30 miles.

Calcutta, 13th April 1882.

GILLANDERS, ARBUTHNOT &amp; Co., Secretaries.



# SUPPLEMENT TO The Calcutta Gazette.

WEDNESDAY, APRIL 26, 1882.

## OFFICIAL PAPERS.

*Non-Subscribers to the GAZETTE may receive the SUPPLEMENT separately on payment of Six Rupees per annum if delivered in Calcutta, or Twelve Rupees if sent by Post.*

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### NAGPORE RAILWAY SURVEYS.

THE following information regarding the surveys for a proposed line of Railway to connect the East Indian Railway with the Great Indian Peninsular through Chota Nagpur is published for general information.

H. C. LEVINGS,

*Secy. to the Govt. of Bengal, P. W. Dept.*

#### *Memorandum on proposed Railway to connect the East Indian Railway with the Nagpur-Chattisgarh Railway at Belaspur.*

THE routes suggested for this line of Railway have been examined this season—

- I.—From Burrakur through Ranchi, Jushpur State, Surgoojah State, known as the "northern route," and recommended by the Commissioner of Chota Nagpur, Mr. J. F. K. Hewitt, c.s.
- II.—From Burrakur *via* Purulia, Singbhoom, Gangpur, and the northern part of Sambulpur district. This is recommended by Mr. V. Ball of the Geological Survey and others, and is known as the "southern route."
- III.—An "intermediate route" proposed by the Chief Commissioner of the Central Provinces, Mr. J. Morris, c.s., which connects the portion of the northern route from Burrakur to Ranchi with that of the southern route from Raighur to Belaspur by a line from Ranchi *via* Basia and Suadi.

The relative cost of the three lines is roughly estimated as follows\* :—

	Northern line, 303 miles.	Intermediate, 376 miles.	Southern, 366 miles.
	Rs.	Rs.	Rs.
† Preliminary expenses at Rs. 1,500 per mile ...	5,89,500	5,62,500	5,49,000
† Land at Rs. 500 per mile ...	1,96,500	1,87,500	1,83,000
Construction as per details ...	97,43,674	1,03,60,905	1,16,21,242
† Fencing at Rs. 750 per mile ...	2,94,750	2,71,250	2,74,500
Ballast at Rs. 2,500 per mile ...	9,82,500	9,37,500	9,15,000
Permanent-way Rs. 20,500 ...	80,56,500	76,87,500	75,03,000
† Stations and quarters at Rs. 2,000 ...	7,86,000	7,50,000	7,32,000
† Plant ...	5,00,000	5,00,000	5,00,000
	2,11,49,424	2,12,57,155	2,22,77,742
Establishment and contingencies ...	21,14,942	21,25,715	22,27,774
† Rolling-stock at Rs. 7,000 ...	27,51,000	26,25,000	25,62,000
	2,60,15,366	2,60,07,870	2,70,67,546
Or per mile ...	66,197	69,354	74,000

The cost of items per mile are the same for each line, excepting for "construction of line," i.e. cost of earthwork and bridging, which has been calculated on notes of the country traversed.

The northern route, leaving Burrakur on the East Indian Railway, traverses the northern part of district Manbhoom through the middle of the Jhoria coal-field, ascends the Chota Nagpur plateau some six miles south of Gola in the Hazareebagh district. Passing close

\* The estimate as revised in the Chief Engineer's Office is as follows :—

ITEMS.	Northern line, 303 miles.	Intermediate line, 376 miles.	Southern line, 366 miles.	REMARKS.
	Rs.	Rs.	Rs.	
1. Preliminary expenses, at Rs. 1,500 per mile.	5,89,500	5,62,500	5,49,000	
2. Construction as per details ...	96,70,773	1,01,83,413	1,07,30,916	
3. Level-crossings, at Rs. 200 per mile	78,600	75,000	73,200	
(a) 4. Fencing, at Rs. 1,000 per mile...	3,93,000	3,75,000	3,66,000	(a) Both sides of line.
(b) 5. Ballast „ 3,300 „ ...	12,96,900	12,37,500	12,07,800	(b) Includes 10 per cent. for sidings.
(c) 6. Permanent-way, at Rs. 21,370 per mile.	83,98,292	80,13,637	78,21,310	(c) Ditto ditto.
7. Stations and quarters, at Rs. 2,125 per mile.	8,35,125	7,96,875	7,77,750	
8. Plant ...	6,00,000	6,00,000	6,00,000	
9. Rolling-stock, at Rs. 10,000 per mile.	39,30,000	37,50,000	36,60,000	
10. Establishment, at 10 per cent. on items 1 to 7, inclusive.	21,26,219	21,24,392	21,52,597	
11. Contingencies, at 5 per cent. on all except establishment.	12,89,609	12,79,696	12,89,298	
Grand Total ...	2,92,08,018	2,89,98,013	2,92,27,871	
	Per mile.	Per mile.	Per mile.	
	74,321	77,328	79,858	
This does not include land, which, at Rs. 1,100 per mile, will amount to.	4,32,300	4,12,500	4,02,600	

† Item as per Colonel Stanton's note.



to the station of Ranchi, it runs through the northern part of Lohardugga district into the Jushpur territory a few miles east of Jushpurnuggur, crossing the Eib and Mand, passing north of Lakhunpur, Surgoojah, from there runs to south-west and south *viâ* Uchlānga, Katghora to Belaspur.

From Burrakur river, over which a bridge of 1,800 running feet water-

\* Although rock crops up at the foot of the river bank, I am informed by men who worked at the Grand Trunk Road bridge that the piers were built on wells sunk 60 feet below the bed, one pier only being founded on rock at a depth of 40 feet below the bed.

way is required, to the Damooda,\* 29th mile, the line would pass through a country with rather high ridges and deep depressions, crossing the Kuondya nullah and smaller streams.

There are many large and prosperous villages along the route: cultivation is principally rice.

Jhoria, at the 25th mile, is a large village of some 2,000 inhabitants; the exports from here are lac, oilseeds, rice, and a small quantity of silk, the imports being piece-goods and salt. Coal is to be found in most of the deep nullahs near this village, but owing to its distance from Burrakur it has not been worked.

The Damooda river requires 1,000 running feet of waterway, and the stream runs about 100 feet below the general level of the country necessitating a high bridge, and it is probable that well foundations will be required, though sandstone rock crops out at the foot of the river bank as at Burrakur.

From the Damooda river, which should be crossed between Tulgureea and Mahal, the line would run nearly on the watershed, till it crosses the Gogra river north of Chasnunda, a considerable village with a bazaar and some 500 houses. The produce from Purulia would probably be obtained here. Crossing the Gogra river at mile 44th, requiring a bridge of 160 feet waterway, the line runs along a ridge forming the minor watershed of the Gogra and Damooda. From this ridge numerous ravines run to each stream, and the slope of the country being rapid, they are very deep at a short distance from either side of the ridge.

From the 44th mile the line runs through a very undulating country to Gola, a large village in the Hazaribagh district, at 75th mile, at which place the produce from the towns and villages of the Damooda valley would probably come to the Railway; also from Jhulda, the principal trading town in western Manbhoom.

Four miles from Gola the ascent of the northern slope of the Chota Nagpur plateau commences. A gradient of 1 in 100 is obtainable, but necessitates a tunnel, and perhaps curves of  $\frac{1}{4}$  mile radius. The ridge of the plateau is nearly straight for a few miles. On the north side are low parallel spurs with valleys running parallel to the ridge connected with it by narrow necks, and at the distance south of a mile-and-a-half the Suburnarekha river runs through a gorge also parallel to the crest of the ridge. The most extensive portion of the ascent will be about six miles in length, involving the construction of a tunnel in gneiss rock, and some heavy cuttings and embankments with long culverts. The total rise on this gradient will be about 650 feet, requiring some 13 miles of ascent, but two-and-a-half miles at the commencement of the ascent, and four-and-a-half miles at the top, would be ordinary work. From the Gola Ghât part of Ranchi, and into the 130th mile, the country is an undulating plateau under rice cultivation. Between the crest of the Gola Ghât and Ranchi, the drainage which rises everywhere along the north edge of the plateau for some 40 miles west is crossed. A little to the west of Ranchi, about the 130th mile, the line crosses the watershed of the Koel and Suburnarekha rivers; then descends to the valley of the Koel, crossing this river at the 155th mile with a bridge of 600 feet waterway about 40 feet above the bed.

Between the Koel and the Sunk is another high watershed, rising suddenly some 165 feet, with a corresponding but longer fall on the west. Some rather heavy work is required up to the Sunk crossing mile 175. A bridge of 600 feet waterway is here required; the foundation of this and of the Koel will be on rock.

The line now gets into hilly country with a good deal of forest land. From Lodam to the foot of the Kastura Ghât there is a great deal of jungle, and some time was required to find an easy route to the head of the Kastura Ghât. The descent here is 550 feet, requiring 11 miles of ghât work, and

gradients of 1 in 70 and 1 in 80 will probably be required. From the foot of the Kastura Ghât the line descends to the Eib through what is described as a very easy country, the valley being cultivated.

Crossing the Eib at 21<sup>st</sup> mile, over which a bridge of 500 feet is required with rock foundations, the route lies up the Dorhi valley, ascending apparently 1 in 100 without much work to a height of 400 feet above the Eib in 20 miles. The Dorhi valley is cultivated in patches, but all round are hills covered with forest; the main *pât* lying on the north of the line.

From the Dorhi valley the line emerges on the head waters of the Maini, which rises in the main *pât*, skirts the foot of this up to the crest of the watershed between the drainage flowing to the north and to the south.

Here another ghât descent of some 235 feet is required. Mr. Dibblee proposes to overcome this by a very circuitous line, involving a curve of about 1,000 feet radius.

From this ghât to Lakhanpur in Surgoojah the country is cultivated, and a rather wide plain extends up to the Rer river, which is crossed by a bridge of 400 feet waterway, but to obtain length to descend from the high ground to the river, a sharp bend to the south is required.

After crossing the Rer the country is scarcely populated, and is covered with forest intersected with numerous ravines, and the line has to be carefully located to avoid hills and to take advantage of the ground.

At the 313<sup>th</sup> mile Uchlunga is reached; the line turns sharp to the west as far as Kedai on the southern edge of the plateau and close to the Hesdoo river, which flows some 400 feet below. To avoid a descent of 400 feet to the river, an ascent of 400 on the opposite side, and a similar descent of 400 to the Tan river, and another ascent and descent beyond this. Mr. Dibblee examined a line along the valley of the Hesdoo, which he pronounces practicable, but which, judging from the sharp bends and very tortuous course, would be attended with considerable expense and inconvenience, if not danger, in working. Crossing the Hesdoo at the 325<sup>th</sup> mile, and the Tan at the 340<sup>th</sup> mile, with bridges of 700 feet and 400 feet span, the line passes Katghora, and through an opening in the Ratanpur hills, passing close to Ratanpur on the east side, emerges into the plain country at mile 378. From Ratanpur to Belaspur the country is a flat plain and under rice cultivation. The line would run nearly on a watershed, crossing the Arpa river north of Belaspur, where the river is wide and shallow, but no better crossing is to be had above the junction with the Karung river on this side of the town.

The length of this route is 393 miles, measured in the inch to mile survey maps. Of this distance from Burrakur, 200 miles may be considered as passing through fairly populous and cultivated country, 113 miles run through narrow cultivated valleys surrounded by hills and forest, and 80 miles through almost uninhabited country covered with forest. Coal is obtainable in the western part of the Surgoojah State, but has not hitherto been worked, there being no demand for it, and the population in this part of the country is but scanty.

#### *Intermediate route.*

This includes the portion of the northern route already described as far as Ranchi for 110 miles in length.

The line would now run to the south-west, making a slight detour to keep near the head waters of the Suburnarekha and Kanchi rivers, passing the village of Mattola 114<sup>th</sup> mile, Lodhma 120<sup>th</sup> mile, Machia 127<sup>th</sup>, Tilmi 134<sup>th</sup>, Jeria 140<sup>th</sup>, and crossing the Karo river at 145<sup>th</sup> mile.

Up to this point the plateau is undulating and under rice cultivation for miles east and west. The Karo river requires a bridge of 400 feet waterway. From this river to the Koel the country is hilly, the low lands being under rice cultivation, and considerable care will have to be given to the location of the line to avoid the hills. At the 150<sup>th</sup> mile, west of the village of Kamdera, the country falls suddenly 150 feet from the ridge, dividing the basins of the Karo and Koel rivers.

Crossing the Koel east of Sukenda, with a bridge of 800 feet waterway, the line would run north of Sasia, 162<sup>nd</sup> mile, and W S W to Agarma, 167<sup>th</sup> mile, along a minor watershed covered with forest, turning south at 168<sup>th</sup> mile to Kolabira. From Agarma to Kolabira a great deal of rock crops out on the

surface of the country, and the line will require very careful location, and the country is hilly with not much cultivation.

Between the 175th and 182nd mile the country falls 400 feet. There is, however, a valley in the hills down which the line could be taken, and length obtained for a gradient of 1 in 100 at rather heavy expense to Kudrung. The range of hills through which it is necessary to pass form part of the watershed between the Koel and the Sunk\*.

From Kudrung, 183rd, to the Sunk river, 204th mile, the country is easy and work would be light. The valley is narrow but fairly populated, but land is being cleared everywhere of forest, and new villages are springing up all along. The Sunk requires some 800 running feet waterway; rock foundation would be obtained.

The watershed of the Sunk and Eib has now to be crossed, and from the 204th to the 230th mile the country is very rugged and rocky, covered with forest and scarcely populated.

Of this 26 miles I calculate 4 miles will be as expensive as ghât work, and have allowed for it as such; the remainder through forest can be taken as ordinary work.

At the 230th mile the line would emerge into rich land, in which tobacco, sugarcane, oilseeds and rice are grown in abundance, and the country is comparatively flat up to the Eib river, 250th mile. About the 240th mile the valley widens out very considerably, being not far from its junction with the main valley of the Mohanuddy. The Eib is here a broad river with a sandy bed, a little rock is met with in places, but dips rapidly beneath the sand, and lies probably generally at some depth; a bridge of 1,600 feet waterway is required.

From the Eib to Doolunga, 264th mile, there are no difficulties. Five miles south of the 255th is the large market village of Rajpur, containing a population of 1,000 inhabitants, and produces sugarcane, pân, tobacco, oilseeds, grain and rice. The Basunder nullah is a tributary of the Eib, is crossed at the 259th mile, with a bridge of 200 feet waterway. In the Doolunga nullah, about the 264th mile, coal is found cropping out at the nullah bed.

From this point to Hingir a line was prospected by Mr. Ramsay and myself *via* Hingir to Raigurh. This route, however, does not appear practicable, excepting at great expense and with severe gradients, although the survey sheet shows no particular obstacles. The survey sheet, C. N. No. 54, is somewhat incomplete in detail about this place. For 15 miles the country is covered with hills, ravines, and forest. Hingir is in a high valley between two ranges of hills.

The winding path rises 273 feet in  $1\frac{1}{2}$  miles; falls 126 feet in 3 miles; again rises 36 feet and falls 36 feet in  $1\frac{1}{2}$  miles; rises 123 feet in the next  $\frac{3}{4}$  mile, and falls 348 feet in 5 miles, and the valley being narrow, there does not appear much room for curving round the heights. Further reconnaissance is therefore being made between the Eib valley and the village of Arbhar. One route to the north, *via* Tekripara, Patrapali, Tiparia and down the valleys of the Koledaga and Kurket crossing the Mand at Gurda, and another to the south from Raigurh towards Rajpur.

The northern of these alternatives would be preferable. The east part of it, as far as it meets the road from Raigurh to the north, has been travelled over by Mr. Clayton, Assistant Engineer, who reports it quite practicable as far as he went, and I was informed at Raigurh that the route is practicable between the hills to the westward as far as Korba.† The line would pass through a long and wide strip of coal country. The southern alternative would run across only a narrow tongue of Burrakur rocks in which coal is found. Rupees fifteen lakhs allowed by me for the 15 miles past Hingir in the rough approximate estimate now drawn up, with the estimated cost of the remaining portion to Arbhar, would probably more than cover the cost of the alternative.

This description of the Hingir route should properly have been given in the report on the southern line, as the intermediate joins the southern line at its 264th mile from Burrakur, equivalent to 255 of the southern line.

\* Since this report was written, information has been received to the effect that very serious difficulties have been met with between Kolabira and Kudrung, so much so as to render it doubtful if the intermediate route is even practicable.

† This route has since been found practicable.

The rest of the country into Belaspur is nearly on flat ground; the rivers to be crossed are described in the southern route. The length by Ranchi, Suadi, Hingir, and Raigurn to Belaspur is 375 miles, of which 243 may be said to be through fairly cultivated and populous country, 82 through narrow cultivated valleys and forest surrounded with hills, and some 48 miles barely inhabited.

*Southern Route.*

This line should leave the East Indian Railway at Seetarampur to avoid the double crossing of the Burrakur and Damooda rivers, which are each of them almost as wide above their junction as at the crossing below the junction. Mr. Ball's reason for selecting Burrakur as a starting point was that he had been informed that the bridge over the Grand Trunk Road might, if the girders were strengthened, be made use of for the Railway. The unanimous opinion of Messrs. Dibblee, Ramsay and myself is that the piers of this bridge only could be used, and that new girders and roadway would be indispensable. There are three main girders in each span of a very light build, and the bridge consists of nine spans of 150 feet and 7 arches of 75 feet.

The expense of removing these girders and putting up new ones to accommodate road and railway traffic, with the addition of the bridge required on the Damooda river and Khoodya nullah would be more expensive than the crossing below the junction and joining on to the East Indian Railway at Seetarampur, besides the inconvenience of obstructing the large coal traffic over the bridge; the rise to the East Indian Railway would be very considerable, and the junction would require sharp double curves.

Assuming Seetarampur as the junction, the line would traverse a high ridge between Seetarampur and the Damooda. At about the 5th mile the Damooda would be crossed by a bridge of about 1,800 feet waterway.

After crossing the Damooda the line would wind round the east of the Pachet Hill to Ragunathpur—a large market village—at the 20th mile. From here to Purulia, 45th mile, running on or close to the watershed of the Damooda and Cossye rivers through a fertile country south of Purulia, the Cossye river is crossed (mile 48th) near the village of Kutloie: seven hundred running feet waterway is required on well foundations.

Up to the village of Burraoomra, 57th mile, the country is easy, and as already described. From Burraoomra southward the ridges become rocky and country more expensive to work through, particularly near Maldah, 67th mile, where a detour to run between the hills is required. The country gets more hilly till the Dalma range is reached, which the line crosses near the village of Chandil, 78th mile. The Kowaree and Bamnee rivers, 56th and 75th of 156 feet waterway each, are the only important streams on this length.

At Chandil a 15 feet rock-cutting is said to be required, and the country rises to a ridge 57 feet higher, and falls again 206 feet to the bed of the Suburnarekha river, three miles south of the ridge. The Suburnarekha requires 1,100 feet waterway; shale crops out in the bed in various places. South of the Suburnarekha is the end of the range of hills dividing Manbhoom from Singbhoom, and the ground rises at once 135 feet to the top of the ridge in about one-third of a mile, involving some 50 feet depth of rock-cutting. South of the ridge, and running along the foot of it, is a nullah, the bed of which is 75 feet lower.

From the Suburnarekha to the Khori nullah, 90th mile, the country is rocky and covered with forest, crossing several spurs of some low hills forming the watershed of the Suburnarekha and its tributary the Sanjai.

From the 90th mile the route lies up the valley of the Sanjai through undulating open country, crossing several minor streams, tributaries of the Sanjai, at villages Sengeri, mile 90th, at Ukri, mile 94th, at Tilingtiping, mile 102nd, at Asantoria, mile 105th, at Paria, mile 111th, at Ulibira, mile 112th, and at Jautilbera, mile 117th. The country is under rice cultivation, and the valley is a fair breadth up to 120th mile between the Sanjai and the northern hills. On the south side of the Sanjai is the eastern end of the Saranda Hill range nearly up to Ohyebassa. The route through the Soru pass was tried in order to avoid crossing so many tributaries of the Sanjai, but proves to be nine miles longer and more expensive than up the valley.



From 120th mile the valley of the Sanjai now becomes very narrow and rocky in places. The river is crossed at the 128th mile, and the watershed between Sanjai and Koel valley passed at 135th mile at Dumurea—a rise of 263 feet above the bed of the Sanjai, and 176 above the bed of the Gogra, which is crossed at 132nd mile. The work is somewhat heavy up to the 140th mile, and the Sanjai requires 400 running feet of waterway.

From the 140th mile to 163rd mile the country is thick forest and very hilly, rising and falling very considerably as ridges and streams are crossed. This length has been estimated therefore as ghât work at Rs. 1,00,000 per mile. The Karo nullah, 200 feet waterway, is crossed at 144th mile, Koina 200 running feet at 153½, Galoon 60 feet bridge at 155, three nullahs from 40 to 80 feet and the Samtia nullah at 162nd mile 100 running feet.

From 163rd to Kutua 200th mile the valley is easier to work through, as the hills are further apart and the ridges not so high. Several small streams are crossed requiring 40 to 60 feet waterway, and at 183rd mile the Brahmini river, which is the continuation of the Koel and Sunk rivers of Chota Nagpur, requires 1,800 running feet of waterway. The bed of the river is rocky, and no expense in foundations will be incurred beyond the Brahmini, the Langi Mohun at 187th mile 100 feet, and Bor nullah 192nd mile 150 feet are the only important streams. North and south of the line throughout this length are masses of hills, the southern being the Saranda range. Throughout this length the country is partially cultivated, but the population is scanty.

From the 200th mile to 220th mile crossing the ridge dividing the Sunk valley from the Sampai at Sogra, 205th mile, which is 200 feet higher than Kutua, the country gets more and more cultivated as the valley opens out. Several nullahs from the north-west face of the Saranda hills are crossed and the country is undulating.

At the 220th mile a broad open plain is reached, well cultivated and populous, much as described already in the intermediate route south of Suadi. The valley of the Sampai joins that of the Eib opposite the 215th mile: up to Rajpur, 245th mile, there are no difficulties.

The Eib would require at least 1,800 feet waterway here, possibly more; the cross section was taken at Talpachia, higher up, where at first we proposed to cross, but I thought it advisable to go if possible close to the large village of Rajpur.

From Rajpur, which has been already described, the route proposed was *via* Doolunga to Hingir and Raipurh. The reasons for abandoning this have already been given.

Raipurh is a small town of some 5,000 inhabitants on the river Kelo, doing a small trade with Sambulpur. From this town to Belaspur, after skirting for 3 miles the ravines of the Kelo up to the 286th mile, the route lies in the valley of the Mohanuddy, a broad open plain, the only difficulties being the crossing of several tributaries of the Mohanuddy, which is expensive work, as follows:—

- At 292nd mile the Mand river, 1,500 feet waterway, bed sand and the bridge must be on wells.
- At 314th, Sapnai nullah, 120 running feet.
- At 315th, Borai river, 600 running feet, good foundation.
- At 337th, Son river, 300 feet.
- At 335th, Hesdoo, 1,000 running feet, foundation rock.
- At 355th, Lelegur nullah, 300 running feet, foundation rock.
- At 362nd, Arpa, 500 running feet, foundation rock.

The junction with the northern line and probable C. P. line from Raipur is at the 366th mile. This line is therefore the shortest of the three, but the extent of the bridging and the rough work crossing the Suburnarekha valley and from the Sangai into the Koel and Sunk valleys make it expensive, and rises of some 200 feet to cross the ridges are not unfrequent in the hilly country.

Of this length of 366 miles, it may be estimated that 200 miles run through cultivated populous country, 86 miles through narrow valleys partially cultivated, and 80 miles through forest and barely populated country. There are copper mines in the Saranda hills and iron ore in abundance, as indeed there



is in all these routes. The country south of Chyebassa appears, however, cut off from the Mohanuddy by an extensive range of hills.

The respective merits of these routes, so far as regards cost and probabilities of local traffic, may be summed up as follows:—

Northern route, probable length	...	393 miles.
Probable cost	...	Rs. 2,60,16,366*
Cultivated and populated	...	200 miles.
Narrow valleys half forest	...	113 "
Forest and uninhabited	...	80 "
Intermediate probable length	...	375 "
Cost	...	Rs. 2,60,07,870†
Cultivated and populous	...	245 miles
Narrow valleys half forest	...	82 "
Forest and uninhabited	...	48 "
Southern route, probable length	...	366 "
Probable cost	...	Rs. 2,70,67,546‡
Cultivated and populated	...	200 miles
Narrow valleys half forest	...	86 "
Forest uninhabited	...	80 "
Coal at Burrakur and Hieger.		

This report has been drawn up from my rough notes and of the Executive Engineer's with a view to furnish, at the earliest practicable date in a connected form, some idea of the description of country traversed without reference to alternatives still requiring examination. It is believed that it furnishes a sufficiently approximate view of the relative value of the different routes, and shows to a certain extent the work that has been done by the officers out on the reconnaissance duty. More complete information can of course be furnished when the parties return from their field work, and are able to work up their notes and levels and surveys.

W. H. PARKER, M.I.C.E.,

*Engineer-in-Chief, Nagpur State*

*Railway Survey.*

\* As revised (including land) Rs. 2,60,40,318.  
† Do. do. " 2,64,10,673.  
‡ Do. do. " 2,90,30,471.

## CALCUTTA EXHIBITION OF INDIAN ART MANUFACTURES, 1881-82.

REVENUE DEPARTMENT.—MISCELLANEOUS.

*Calcutta, the 22nd April 1882.*

## RESOLUTION.

READ—

The report of the Committee of Management of the Calcutta Exhibition of Indian Art Manufactures, together with the awards of the jurors.

In January 1881 the Native Industrial Art Committee at Simla proposed to hold an Exhibition of artistic textile fabrics and of art metal work at Calcutta in December of the same year. At the suggestion of the Lieutenant-Governor the scope of the Exhibition was enlarged by the addition of a number of other classes of articles in which competition was to be invited, and it was decided that the whole management of the Exhibition should be left to the Government of Bengal. Mr. Locke, the Secretary to the Committee of Management of the Calcutta Economic Museum, was invited to draw up a memorandum regarding the plan of the Exhibition, the arrangements to be made for holding it, its cost, and the articles which should be selected for exhibition, and his suggestions formed the basis of the plan of the proposed Exhibition. The Committee of Management of the Economic Museum consented to undertake the organization and supervision of the Exhibition, which it was decided was to be confined to the following classes of articles:—

Silk, including corah, plain white, coloured and figured silks, tusser, and other wild silks.

Muslin and other cotton fabrics, including durries, purdas, and table-covers.

Mixed silk and cotton fabrics.

Embroidery and lace.

Carpets.

Mats and matting.

Gold and silver work, jewellery, &c.

Ivory and wood carvings and inlaid work, including horn work, turned work, lacquered work, straw and cane work, and other fancy ware.

Metal ware.

Pottery.

Kishnaghur figures.

Stone carvings.

Glass ornaments.

Shell carvings.

To these the following classes were subsequently added, viz.—

Manufactures from flax, hemp, cocoanut and other fibres, including paper.

Woollen fabrics.

Leather manufactures.

Cabinet ware and furniture.

Soap.

2. A grant of Rs. 22,250 was assigned for the necessary expenses, power being given to the Committee to spend the funds at their disposal to the best advantage within this limit. It was decided that the Exhibition should be open, so far as space would allow, to manufactures from all parts of the Indian Empire, and the Committee were desired to place themselves in communication with the various local Governments and Administrations with the view of procuring articles for exhibition. The Lieutenant-Governor did not feel himself at liberty to sanction expenditure from the Provincial Funds of Bengal for the purchase of specimens from other parts of India; but the Committee were authorized to arrange with other Governments for the supply of articles such as it would be desirable to include in the Exhibition if they undertook to dispose of them afterwards, by sale or otherwise, as the Governments concerned might desire. The Lieutenant-Governor at the same time invited the co-operation of all local Governments and Administrations, and Sir Ashley Eden has much pleasure in acknowledging the assistance which other Governments have kindly afforded towards rendering the Exhibition successful. A more varied series of articles would no doubt have been contributed from other provinces had it not been that the views of the Native Industrial Art

Committee, as to the desirability of confining the Exhibition to a few classes, were made generally known, and had not that Committee confined its influence to securing a thorough representation of the selected classes for which the Committee offered medals, *i.e.*, (A) Carpets, (B) Embroideries, (C) Lace, (D) Kinkobs, (E) Metals.

3. The Exhibition, which was held in the Indian Museum, was opened on the 4th January last by His Excellency the Viceroy, and remained open until the end of February, during which time it was visited by 6,143 visitors, exclusive of holders of season tickets.

Admission by daily tickets commenced on the 10th January, the charge made being one rupee on Mondays, Wednesdays and Thursdays, eight annas on Saturdays, and four annas on Sundays. The Exhibition was not opened on Tuesdays and Fridays. On the 7th February the rate was reduced uniformly to eight annas, and on the 14th idem to 2 annas. The total receipts from season tickets were Rs. 1,017, and from daily tickets Rs. 1,832-6. Some dissatisfaction was felt at the absence of a catalogue during the greater part of the time for which the Exhibition remained open. The amount of work, however, connected with the Exhibition, so greatly exceeded the anticipations of the Committee, that it was not found possible to complete the compilation of the catalogue until the Exhibition had been open for some time.

4. Altogether 4,873 articles were exhibited for sale at prices amounting in the aggregate to Rs. 1,27,807, of which 2,323 were sold while the Exhibition remained open realizing Rs. 28,400, and 1,053 more were disposed of afterwards by public auction for about Rs. 6,500, so that the value of the articles sold amounted in round numbers to Rs. 35,000.

The number of articles exhibited in each class are given in the table on the margin. Of these,			2,560 were contributed		
I.—Silk fabrics, &c. ...	261	XII.—Metal-ware ...	711	from Bengal, 1,135 from Madras, 156 from Bombay, 518 from the North-Western Provinces, 96 from British Burmah, 63 from Assam, and 695 from Hyderabad and the Native States. Three hundred and fifty articles were exhibited on loan, and had the space for exhibition at the disposal of the	
II.—Muslin and other cotton fabrics, &c. ...	632	XIII.—Pottery ...	466		
III.—Mixed silk and cotton fabrics ...	82	XIV.—Kishnagur figures and similar specimens of modelling ...	31		
IV.—Embroidery and lace ...	292	XV.—Stone carvings ...	243		
V.—Carpets ...	51	XVI.—Glass, including personal ornaments made of that material ...	70		
VI.—Mats and matting ...	61	XVII.—Shell carvings ...	59		
VII.—Manufactures from flax, hemp, cocoanut and other fibres, including paper ...	129	XVIII.—Cabinet-ware and furniture ...	41		
VII.—Rope manufactures ...	59	XIX.—Soap ...	60		
VIII.—Woollen fabrics ...	...	Total ...	5,223		
IX.—Leather manufactures ...	157				
X.—Gold and silver work, jewellery, &c. ...	1,029				
XI.—Ivory and wood carvings, &c. ...	789				

Committee been greater this number could have been largely increased.

5. In point of merit the classes best represented were II, muslins and other cotton fabrics; IV, embroidery and lace; VII, manufactures from flax, hemp, cocoanut, and other fibres, including paper; to each of these classes two gold medals were awarded. One gold medal was also awarded to class V carpets. Altogether 7 gold medals, 35 silver medals, 60 bronze medals, and 84 certificates of honourable mention were awarded.

6. The entries of silk fabrics were not very numerous; the jurors consider that the coloured, figured and printed silks possessed most merit, and have singled out for special commendation two pieces of figured silk from Tibet exhibited by the Local Committee of Darjeeling. It is to be regretted that these specimens not being of Indian manufacture were held to be ineligible for competition. The printed silks from the 24-Pergunnahs, and the figured silks from Maldah and Midnapore, are also commended. The Committee express themselves disappointed with the specimens of corah silks and tussers. There is no doubt that the silk-manufacturing industry throughout Bengal is in a languishing state, though the excellence of some of the specimens exhibited is sufficient to show that the art of skilful weaving is not lost.

7. The class of cotton fabrics was well represented. The Basel Mission Weaving Establishment at Cannanore, and the Mission Industrial Establishment at Calicut, were specially successful. The former gained a gold and the latter a silver medal for general excellence of manufactures; while two silver medals for table-linens and towellings, and one bronze medal for

shirtings, were awarded to the Basel Mission Weaving Establishment, and three bronze medals for trowserings, gingham and jheel cloth fell to the Mission Industrial Establishment. Both establishments also earned a large number of certificates of honourable mention. It is gratifying to observe that several pieces of very fine Dacca muslins were exhibited, and that the jurors were able to award one gold and one silver medal for two of these.

8. In the case of class IV (embroidery and lace) the jurors found it necessary to make separate awards for embroidery in gold and silver, in silk, and in cotton, and for brocades and laces. Taking the class as a whole, they remark that the articles exhibited "show that care and skill have produced several excellent specimens in the various handicrafts both for design and for fineness of workmanship. A gold medal was awarded to the Jeypore School of Art for two specimens remarkable for their richness of design and elegance of workmanship, and a silver medal to Hazarimul for a blue satin robe embroidered in thread.

9. The jurors in Class V (carpets), while awarding praise where due, have done very good service by calling attention to the main defects observed in some of the specimens exhibited. Their remarks are as follows:—

While admitting the general excellence of the collection, we think it will perhaps be of more advantage to this general branch of manufacture to note some of the defects which struck us.

In material there were some specimens of the Mirzapore class so coarsely woven and so heavy in pile as to render it doubtful whether their warp would stand the removal and dusting which would be necessary in ordinary use.

The texture of some specimens was uneven; for though the various lines of the pattern had been fairly well preserved, there was a want of evenness in the two sides of the work, due to the irregular beating home of the weft threads.

There was also in one or two of the specimens irregularity in the tension of the warp, which prevented the carpet from lying quite flatly when spread out.

The designs were generally good, but there appeared to be want of judgment in some cases in suiting the design selected to the size of the work. This defect was specially remarkable in the details and width of borders.

Of the colouring and dyeing we noticed some specimens in which aniline had been used. As all the colours from this source are fugitive, they should on no account be used.

In other specimens there was defective dyeing of blacks, probably from too long exposure to the iron solutions or defective washing. The wool had become friable and powdery. The blacks in some other specimens had tinged the adjacent colours—an error, we think, of deficient washing of the worsted after dyeing.

The collection of carpets was a very varied one both in regard to material, extent, design and colouring, and its general excellence is admitted. A gold medal was given for two specimens from Kurrachee, distinguished by the fineness and evenness of the weaving, excellence of design and colours, and perfection of surface. Carpets from Hyderabad, Mirzapore, and Hazaribagh also earned silver medals.

10. The report of the jurors as to the mats and matting exhibited in Class VI is unfortunately unaccompanied by any remarks as to the general character of the articles contributed. Silver medals have been awarded to the Furreedpore and Dooriah Local Committees for sitalpati mats, and four other specimens of the same manufacture gained bronze medals. In coir matting, the rewards, four bronze medals, were gained by the Midnapore Jail, and one honourable mention was awarded to the Kurrachee Jail. In aloe fibre matting the successful exhibitors were Messrs. Harton and Company and the Hazaribagh Jail.

11. An interesting and valuable report has been submitted by the jurors on Class VII (paper) which, as it extends to some length, is printed as an appendix to this Resolution. The question of improving the Indian manufacture of paper, and of finding a market in England for the various Indian products capable of being used as material for paper manufacture, is one of great importance, and the remarks and suggestions of the jurors upon the subject deserve careful attention.

The only specimens of machine-made papers come from the Bally Mills, which contributed papers of plantain, aloe, moonj, mahalyne, and jute fibre. The same mills contributed also specimens of blotting paper, cartridge paper, and brown paper, all of which are commended by the jurors. The jurors draw special attention to the fact that in no instance does an excess of clay appear to have been employed in the manufacture of the paper exhibited by the Bally Mills Company, to whom they have awarded a gold medal and a



certificate of honourable mention. Of the native hand-made papers exhibited, with one exception, the Committee do not speak favourably. The writing papers are coarse and wanting in colour and surface, and the blotting paper is far too absorbent. The exception alluded to is one of Bhutea paper from Darjeeling, which is praised both for its quality and toughness. The attention of the Commissioner of the Rajshahye and Cooch Behar Division will be invited to this subject, on which he will be asked to submit a report to Government.

12. With the exception of a few specimens of native manufacture from the Hooghly and Patna districts, the whole of the ropes and cordage exhibited were sent from the Ghosery Rope Works or by Messrs. Ahmuty and Company of Calcutta. To the former a gold medal was awarded.

13. No awards would appear to have been made for woollen fabrics, all of which, with the exception of two specimens from the Ahmadnagar Municipality, were exhibited by two Calcutta cloth merchants.

14. In leather manufactures 157 articles were exhibited, to three of which the Jurors have awarded bronze medals. The general quality of the leather is reported to have been inferior. Many of the tanneries in the Suburbs of Calcutta were not represented, and there was no competition from Cawnpore.

15. The exhibition of gold and silver ornaments was unsatisfactory. The jurors' remarks on the subject are as follow :—

The artistic beauty of oriental design, and the manipulative skill for which Indian workmen are so justly famed, are very poorly and inadequately represented by the collection of gold and silver ornaments in the Exhibition.

Delhi jewellers are celebrated for their fine work both in gold, silver, and precious stones; but the specimens exhibited, which have, we observe, been sent by Calcutta dealers, are of the most ordinary kind, and are not worthy of remark either as regards design or workmanship. Two or three of the pretty jewelled necklaces of Delhi are in the collection, but they are, on the whole, inferior specimens. Very few of the well-known turquoise or jade ornaments are exhibited, and those are very ordinary indeed. Many of the designs in jewellery are poor copies of European patterns. It is disappointing to find that the beautiful silver filigree work of Cuttack is represented by specimens only of the most ordinary character, neither remarkable for beauty of design nor skilled workmanship. A well-selected collection of the best and most highly-finished articles of this kind would have made a handsome and striking exhibit.

Burma might have made a fine show with the fine lace-like ruddy gold ornaments and grotesque silver-work in which her patient and skilful workmen delight; but the exhibits, with the exception of a choice selection of silver bowls and cups, lent by Sir Ashley Eden, are confined to a few ordinary ornaments and articles of no merit.

The 24-Pergunnahs exhibit some gold watch chains, silver card-cases, cups, and other articles, mostly bad copies of European patterns, and not remarkable for either quality or finish.

Dacca, Dinapore and Rajshahye are well known for their silver and gold work, but are represented in the Exhibition only by a few articles which do not call for special remark.

The ornaments from Thibet, Darjeeling, and Kassia and Jaintea Hills are more remarkable as curios than as works of art.

A special feature in the Exhibition is the superb collection of gold and silver Swami jewellery and silver plate contributed by Messrs. P. Orr and sons of Madras, to which firm we must award a "Gold Medal." The ornaments are mainly of European pattern, showing the well-known Swami pattern, and are remarkable for their high style of workmanship and finish.

The silver-work is a magnificent collection of cups, vases, claret jugs, caskets, &c., &c., nearly all bearing the Swami pattern, and all finished in the highest style of European art workmanship.

Messrs. Hamilton & Co., who are not competing, exhibit a very fine collection of Cashmere silver-work, purely native, and of the best description, and some magnificent silver race cups and caskets of their own workmanship, besides some elaborately-mounted and highly-finished tiger-claw ornaments in gold work.

Two silver medals were awarded for enamelled work from Jeypore, of which the collection as described is "fairly good of its kind."

16. Class XI has been considered by the jurors under the three heads of ivory carvings, lacquered work and straw work. Among the articles coming under the first category, one has received a silver medal and two were awarded bronze medals. The jurors remark on the absence of lacquered work from Benares, and draw attention to the goodness of the samples from Kotah. Several certificates of honourable mention were given for straw work.

17. Class XII (metal-ware) well represented, there being in all 711 specimens exhibited. The collection is reported to have been a very fine one of the